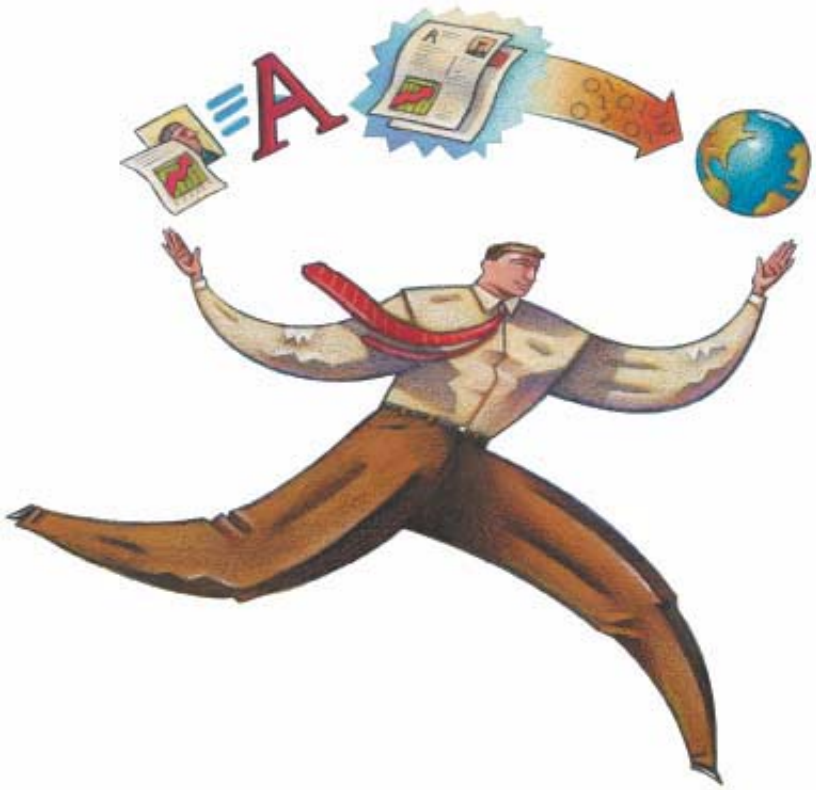
Acrobat Core API Reference

Technical Note #5191

Version :Acrobat 5.0



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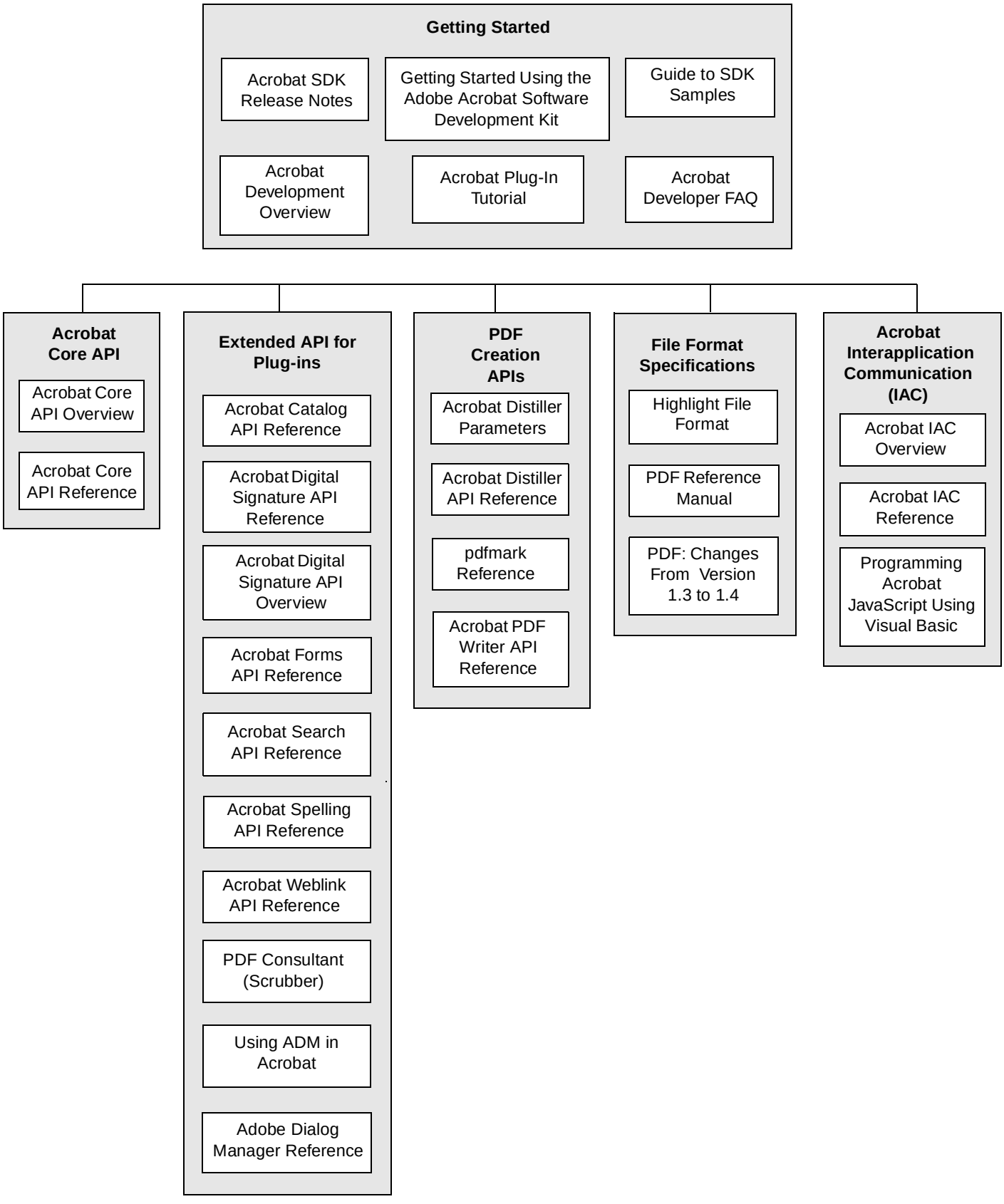
Acrobat SDK Documentation Roadmap



Contents

How to Use the Core API Reference

Description

This Core API technical note is intended for experienced users of the Adobe Acrobat Software Development Kit (SDK). It describes in detail the objects and methods provided by the Acrobat Application Program Interface (API).

In addition to having a working knowledge of ANSI C programming, it is useful to have a good understanding of object-oriented programming concepts, such as the use of methods, classes, objects, and member functions (callbacks).

If you received this technical note without obtaining the entire Acrobat Software Development Kit (SDK), you can get the complete SDK by visiting:

http://partners.adobe.com/asn/developer/acrosdk/main.html

Contents

This technical note contains the following sections:

- Objects. Descriptions of the objects, list of the methods that obtain and dispose of the objects, the functions used to access them, Cos conversion, and validity testing.
- Methods descriptions. Detailed description of each method, including its parameters and return value.
- Callbacks descriptions. Detailed description of callback functions, in which the Acrobat viewer and Library call back plug-ins and applications.
- Declarations descriptions. Detailed descriptions of data structures used by the Acrobat viewer and Library.
- Lists. Lists of useful information, such as UI element names.
- Notifications descriptions. Description of objects that allow a plug-in or application to indicate an interest in a specified event, and provide a procedure that is called each time that event occurs.
- Errors descriptions. List of error categories and error codes. These error codes typically represent exceptions raised by Acrobat.
- Macros descriptions. Detailed description of each macro, which includes operators on fixed-point numbers, conversions between integers and fixed-point numbers, conversions between C strings and fixed-point numbers, math and rectangle utilities, and matrix operations.
- API Changes. Descriptions of new objects, methods, callbacks, and so forth, that have been added or changed extensively.

Words that are underlined are links that take you to a detailed discussion of that object.

Where appropriate, sections are sub-divided into the following layers or models:

- Acrobat Support (AS) layer, which provides a variety of utility methods, including platform-independent memory allocation and fixed-point math utilities.
- Acrobat Viewer (AV) layer, which deals with the viewer's user interface.
- Cos Object System (Cos) layer, which provides access to the low-level building blocks of PDF files.
- Portable Document (PD) layer, which provides access to components of PDF documents.
- PDFEdit, which provides access to PDF page counts associated with the Contents key in the page's directory.
- PDSEdit, which provides access to the logical structure of a PDF document.

Also, where appropriate, methods, callbacks, and so forth, are divided according to the objects with which they are associated.

Other Useful Documentation

You should be familiar with the Acrobat core API and Portable Document Format (PDF). The following technical notes provide this information.

Getting Started Using the Adobe Acrobat Software Development Kit introduces the SDK, plug-ins, Interapplication Communication (IAC), libraries, toolkits, and Host Function Tables (HFTs). In addition to SDK installation instructions, this manual has an extensive "road map" to other documentation.

Acrobat Core API Overview,Technical Note #5190. Gives an overview of the objects and methods provided by the Acrobat core API.

PDF Reference, Version 1.3. Provides a description of the PDF file format, as well as suggestions for producing efficient PDF files. It is intended for application developers who wish to produce PDF files directly. Many of the Acrobat 5 APIs documented in this technical note take advantage of functionality only available in PDF version 1.4. References, however, are to the second edition of this reference (version 1.3). The reference for version 1.4 will be available later this year and this technical note will be updated accordingly.

The Acrobat SDK includes many other books that you might find useful. When mentioned in this document, those books will often appear as live links (blue italic links). However, in order to actually jump from this document to those books, those books must exist in the proper directories within your computer's file system. This happens automatically when you install the SDK onto your system.

If for some reason you did not install the entire SDK onto your system and you do not have all of the documentation, please visit the Adobe Solutions Network web site (

http://partners.adobe.com/asn) to find the books you need. Then download them and install them in the proper directories, which can be determined by looking a the Acrobat SDK Documentation roadmap, included at the beginning of each book in the SDK.

Conventions Used in This Book

The terms “Acrobat viewer” and “viewer” refer specifically to the full Acrobat product. The terms “Acrobat Reader” and “Reader” refer specifically to the freely available Acrobat Reader product, the complete functionality of which is included in the Acrobat viewer. The terms “PDF Library” and “Library” refer to the PDF Libray product, also available from Adobe for PDF developers. Furthermore, the Acrobat documentation uses certain text styles to identify various operators, keywords, terms, and objects, as shown below.

Item	Character Definition	Use and Examples
Filenames; pathnames	Courier, 12-point	`C:\templates\Acrobat_docs`
Code items within plain text; parameter names in reference documents	Courier, 12-point, bold	The **`GetExtensionID`** method returns an **`ASAtom`** object
Code examples set off from plain text	Courier, 10-point, plain (this is the Code para tag)	These are variable declarations: `AVMenu commandMenu,helpMenu;`

Pseudocode	Helvetica, 11-point, italic	`ACCB1 void ACCB2 ExeProc(void)`
		`{`
		`do something`
		`}`

Cross references to Web pages	Blue text; everything else “as-is”	The Acrobat Solutions Network URL is: http://partners.adobe.com/asn
Cross references to titles of other Acrobat SDK documents	Blue text; Helvetica, 11-point, italic	See the *Acrobat Core API Overview*.
Cross references within a document	Blue text; everything else “as-is”	See Section 3.1, “Using the SDK.” Test whether an **`ASAtom`** exists.
PostScript language operators, PDF operators, keywords, dictionary key names; user interface names	Helvetica, 11-point, bold	The **setpagedevice** operator The **File** menu

Item	Character Definition	Use and Examples
Document titles that are not cross-reference links, new terms, PostScript variables	Helvetica, 11-point, italic	*Acrobat Core API Overview* *filename* **deletefile**

Objects

AS Layer

AV Layer

Cos Layer

PD Layer

PDFEdit

PDSEdit

AS Layer

Acrobat Support layer. Platform-independent objects and utility functions used throughout the API.

ASAtom

A hashed token used in place of strings to optimize performance (it is much faster to compare **ASAtom**s than strings).

Obtaining

ASAtomFromString
AVActionHandlerGetType
AVAppGetName
AVDocGetSelectionType
AVMenuGetName
AVMenuItemGetName
AVToolButtonGetName
AVToolGetType
CosNameValue
PDActionGetSubtype
PDAnnotGetSubtype
PDFileSpecGetFileSysName
PDFontGetCIDSystemInfo
PDFontGetSubtype
PDTransGetSubtype
PDXObjectGetSubtype

Attributes

Get	Set
ASAtomExistsForString	—
ASAtomGetString	**ASAtomFromString**

Cos conversion

None

Validity testing

ASAtomExistsForString

Declarations

None

ASCab

ASCab objects (“cabinets”) can be used to store arbitrary key/value pairs. The keys are always null-terminated strings containing only low-ASCII alphanumeric characters and spaces (ASCII character 32). Key names cannot begin or end with a space.

Every time you place a non-scalar value inside a cabinet you are handing that value to the **ASCab** implementation to manage—i.e., putting a value in a cabinet is always a hand-off operation. For example, if you create an **ASText** object and add it as a value in an **ASCab**, the **ASText** object is no longer managed by you; it is managed by the **ASCab**. The **ASCab** will destroy the **ASText** object when its associated key is removed or the key’s value is over-written. Pointer values are a special case discussed in more detail below.

The routine naming convention is as follows:

- “Get” routines return a value. These objects are owned by the **ASCab** and should not be destroyed by the caller of “Get”.
- “GetCopy” routines make a copy of the data; the “GetCopy” client owns the resulting information and can modify it at will; he is also responsible for destroying it.
- “Detach” routines work the same way as “Get” routines but the key is removed from the **ASCab** without destroying the associated value that is passed back to the client of “Detach”. The client is responsible for destroying the returned object.

Normally pointers are treated the same way as scalars; the **ASCab** passes the pointer value back and forth but doesn't manage the data to which it points. This all changes if the pointer has an associated “destroyProc”. If the “destroyProc” is set, the **ASCab** will reference count the pointer to track how many times the pointer is referenced from any **ASCab** (e.g., the reference count will be bumped up whenever the pointer is copied via **ASCabCopy** or added to another **ASCab** via **ASCabPutPointer**) and will destroy the data associated with the pointer when the ref count goes to 0. The data is destroyed by calling the “destroyProc”. Detaching a pointer removes one reference to the pointer without ever destroying the information pointed to. **ASCabDetachPointer** returns a separate value indicating whether the pointer can safely be destroyed by the client or is still referred to by other key/value pairs inside any **ASCab**s—i.e., whether the reference count went to zero when the pointer was detached from the **ASCab**.

Any of the **ASCab** API's can take a compound name: a string consisting of multiple keys separated by the colon (**:**) character—e.g., “Grandparent:Parent:Child:Key”. The implementation will burrow down through such a compound string until it reaches the most deeply nested cabinet. Also, any of the “Put” routines can take a **NULL** key name. If the key name is **NULL**, the routine creates a new, numeric key name. If the cabinet is empty, the first generated key name will be “0” and subsequent names will increase in ascending order. This is useful when treating an **ASCab** as a bag of unnamed items, or when adding an ordered list of items to an empty **ASCab**.

Obtaining:

ASCabNew

Disposing:

ASCabDestroy

Attributes

Get	Set
ASCabGetAtom	ASCabPutAtom
ASCabGetBinary	ASCabPutBinary
ASCabGetBinaryCopy	—
ASCabGetBool	ASCabPutBool
ASCabGetCab	ASCabPutCab
—	ASCabCopy
ASCabGetDouble	ASCabPutDouble
—	ASCabFromEntryList
ASCabEnum	—
ASCabEqual	—
ASCabValueEqual	—
ASCabGetInt	ASCabPutInt
—	ASCabPutPathName
ASCabGetPathNameCopy	—
ASCabGetPointer	ASCabPutPointer
ASCabGetPointerDestroyProc	—
ASCabGetPointerType	—
ASCabGetString	ASCabPutString
ASCabGetStringCopy	—
ASCabGetText	ASCabPutText
ASCabGetType	—
—	ASCabPutNull
ASCabKnown	—
—	ASCabMakeEmpty
—	ASCabMunge

Get	Set
—	ASCabRemove
ASCabReadFromStream	ASCabWriteToStream

Cos conversion

None

Validity testing

None

Declarations

None

ASCallback

Callbacks allow the Acrobat viewer or the Library to call functions in an application or plug-in.

Obtaining

ASCallbackCreate
ASCallbackCreateNotification
ASCallbackCreateProto
ASCallbackCreateReplacement

Disposing

ASCallbackDestroy

Attributes

None

Cos conversion

None

Validity testing

None

Declarations

None

ASExtension

An opaque pointer to an object that identifies a specific loaded plug-in. An unique **ASExtension** object is created for each plug-in when it is loaded. If the plug-in fails to initialize, the **ASExtension** remains but is marked as inactive.

Obtaining

ASEnumExtensions

Disposing

None

Attributes

Get	Set
ASExtensionGetFileName	—
ASExtensionGetRegisteredName	—

Cos conversion

None

Validity testing

None

Declarations

None

ASFile

An opaque representation of an open file.

Obtaining

PDDocGetFile
ASFileSysOpenFile
ASFileFromMDFile

Attributes

Get	Set
ASFileAcquirePathName	—
—	**ASFileSetMode**
ASFileGetEOF	**ASFileSetEOF**
ASFileGetFileSys	—
ASFileGetMDFile	—
ASFileGetOpenMode	—
ASFileGetPos	**ASFileSetPos**
—	**ASFileSetMode**
ASFileGetURL	—

Cos conversion

None

Validity testing

None

Declarations

ASFile Open Modes
ASFile Flags
ASFileMode Flags
ASFileStatus Flags

ASFileSys

A collection of functions that implement file system services, such as opening files, deleting files, reading data from a file, and writing data to a file. Each **ASFileSys** provides these services for one class of devices.

NOTE: To create an **ASFileSys**, simply complete the **ASFileSysRec** structure.

Obtaining

ASGetDefaultFileSys
ASFileGetFileSys
ASFileGetFileSysByName
PDFileSpecGetFileSys

Attributes

Get	Set
ASFileGetFileSysByName	—
ASFileSysGetItemProps	—
ASFileSysGetNameFromPath	—
ASFileSysGetStorageFreeSpace	—
ASFileSysGetTempPathName	—
ASFileSysGetTypeAndCreator	**ASFileSysSetTypeAndCreator**

Cos conversion

None

Validity testing

None

Declarations

ASFileStatus Flags
ASFileSysRec

ASPathName

A file system-specific named location for a particular type of device. Uses the **ASFileSys** structure pointers for callback. An **ASPathName** is specific to a given **ASFileSys**.

Obtaining

ASFileAcquirePathName
ASFileSysAcquireParent
ASFileSysCreatePathName
ASFileSysPathFromDIPath
ASPathFromPlatformPath
PDFileSpecAcquireASPath

Disposing

ASFileSysReleasePath

Attributes:

Get	Set
ASFileSysDIPathFromPath	—

Cos conversion:

None

Validity testing:

None

Declarations

None

ASStm

A data stream that may be a buffer in memory, a file, or an arbitrary user-written procedure. Typically used to extract data from a PDF file. When writing or extracting data streams, the **ASStm** must be connected to a Cos stream.

Obtaining

ASFileStmRdOpen
ASFileStmWrOpen
ASMemStmRdOpen
ASProcStmRdOpen
CosStreamOpenStm

Disposing

ASStmClose

Attributes

None

Cos conversion

None

Validity testing

None

Declarations

None

ASText

An **ASText** object represents a Unicode string. **ASText** objects can also be used to convert between Unicode and various platform-specific text encodings as well as conversions between various Unicode formats (e.g., UTF-16, UTF-8). Since it is common for a Unicode string to be repeatedly converted to or from the same platform-specific text encoding, **ASText** objects are optimized for this operation—e.g., they can cache both the Unicode and platform-specific text strings.

There are several ways of creating an **ASText** object depending on the type and format of the original text data. The following terminology is used throughout this API to describe the various text formats.

- Encoded—A multi-byte string terminated with a single **0** character and coupled with a specific host encoding indicator. In the Macintosh OS, the text encoding is specified using a script code. In the Windows OS, the text encoding is specified using a CHARSET code. On Unix the only valid host encoding indicator is **0**, which specifies text in the platform's default Roman encoding. On all platforms Asian text is typically specified using multi-byte strings.
- ScriptText—A multi-byte string terminated with a single **0** character and coupled with an **ASScript** code. This is merely another way of specifying the Encoded case; the **ASScript** code is converted to a host encoding using **ASScriptToHostEncoding**.
- Unicode—Text specified using UTF-16 or UTF-8. In the UTF-16 case the bytes can be in either big-endian format or the endian-ness that matches the platform and are always terminated with a single **ASUns16 0** value. In the UTF-8 case the text is always terminated with a trailing **0** byte. Unicode refers to straight Unicode without the **0xFE 0xFF** prefix or language and country codes that can be encoded inside a PDF document.
- **PDText**—A string of text pulled out of a PDF document. This will either be a big-endian Unicode string pre-appended with the bytes **0xFE 0xFF** or a string in **PDFDocEncoding**. In the Unicode case, this string may have embedded language and country identifiers. **ASText** objects strip language and country information out of the **PDText** string and track them separately. See below for more details.

ASTexts can also be used to accomplish encoding and format conversions; you can request a string in any of the formats specified above.

In all cases the **ASText** code attempts to preserve all characters. For example, if you attempt to concatenate strings in separate host encodings the implementation may convert both to Unicode and perform the concatenation in Unicode space.

When creating a new **ASText** object, or putting new data into an existing object, the implementation will always copy the supplied data into the **ASText** object. The original data is yours to do with as you will (and release if necessary).

The size of **ASText** data is always specified in bytes—e.g., the **len** argument to **ASTextFromSizedUnicode** specifies the number of bytes in the string, not the number of Unicode characters.

Host encoding and Unicode strings are always terminated with a null character (which consists of one null byte for host-encoded strings and two null bytes for Unicode strings). You cannot create a string with an embedded NULL character even using the calls which take an explicit length parameter.

The "Get*xxx*" calls return pointers to data held by the **ASText** object. You cannot free or manipulate this data directly. The "Get*xxx*Copy" calls return data you can manipulate at will and that you're responsible for freeing.

An **ASText** object can have language and country codes associated with it. A language code is a 2-character ISO 639 language code. A country code is a 2-character ISO 3166 country code. In both cases the 2-character codes are packed into an **ASUns16** value—the first character in bits 8-15, and the second character in bits 0-7. These language and country codes can be encoded into a UTF-16 variant of **PDText** encoding using an escape sequence; see Section 3.8 in the *PDF Reference*. The **ASText** calls will automatically parse the language and country codes embedded inside UTF-16 **PDText** and will also author appropriate escape sequences to embed the language and country codes (if present) when generating UTF-16 **PDText**.

Obtaining

ASTextNew
ASTextFromEncoded
ASTextFromInt32
ASTextFromPDText
ASTextFromScriptText
ASTextFromSizedEncoded
ASTextFromSizedPDText
ASTextFromSizedScriptText
ASTextFromSizedUnicode
ASTextFromUnicode
ASTextFromUns32

Disposing

ASTextDestroy
ASTextMakeEmpty

Attributes

Get	Set
ASTextGetBestEncoding	—
ASTextGetBestScript	—
ASTextGetCountry	**ASTextSetCountry**
ASTextGetEncoded	**ASTextSetEncoded**
ASTextGetEncodedCopy	—

Get	Set
ASTextGetLanguage	**ASTextSetLanguage**
ASTextGetPDTextCopy	**ASTextSetPDText**
ASTextGetScriptText	**ASTextSetScriptText**
ASTextGetScriptTextCopy	—
ASTextGetUnicode	**ASTextSetUnicode**
ASTextGetUnicodeCopy	—
—	**ASTextSetSizedEncoded**
—	**ASTextSetSizedPDText**
—	**ASTextSetSizedScriptText**
—	**ASTextSetSizedUnicode**

Cos conversion

None

Validity testing

None

Declarations

None

HFT

Host Function Table. The mechanism through which plug-ins call methods in the Acrobat viewer or in other plug-ins. A table of function pointers (actually callbacks).

Obtaining

ASExtensionMgrGetHFT

Disposing

HFTDestroy

Attributes

Get	Set
HFTGetReplacedEntry	**HFTReplaceEntry**

Cos conversion

None

Validity testing

HFTIsValid

Declarations

HFTs
HFTEntry
HFTEntryReplaceable

HFTServer

Each **HFT** is serviced by an HFT server. The HFT server is responsible for handling requests to obtain or destroy its **HFT**.

Obtaining

HFTServerNew

Disposing

HFTServerDestroy

Attributes

None

Cos conversion

None

Validity testing

None

Declarations

None

MDFile

A file-system specific representation of an individual file. It uses the machine's native platform-specific data structure to represent a file. In the plug-in API, it is primarily used by Replacement FileSystem implementors. A replacement file system can choose it's own implementation of an **MDFile** that is mapped by the viewer to an **ASFile** for use by clients of the replacement file system. In Acrobat 5, **MDFile** was rename **ASMDFile**.

Obtaining

ASFileGetMDFile

Attributes

Get	Set
ASFileFromMDFile	—

Cos conversion

None

Validity testing

None

Declarations

None

AV Layer

Acrobat viewer layer. A set of objects whose methods allow plug-ins to manipulate components of the Acrobat viewer application itself, such as menus and menu items.

AVActionHandler

Carries out an action. When the Acrobat viewer executes an action, it looks for the action handler with a **type** matching that of the action it is trying to execute. The Acrobat viewer invokes the matching handler to perform the action. If no match is found, the Acrobat viewer ignores the user action.

Obtaining

AVAppGetActionHandlerByType
AVAppEnumActionHandlers

Enumerating

AVAppEnumActionHandlers

Attributes

Get	Set
AVAppGetActionHandlerByType	—
AVActionHandlerGetProcs	—
AVActionHandlerGetType	—
AVActionHandlerGetUIName	—

Cos conversion

None

Validity testing

None

Declarations

AVActionHandlerProcs

AVAnnotHandler

Responsible for creating, displaying, selecting, and deleting a particular type of annotation. There is one annotation handler for each annotation type. The Acrobat viewer contains two built-in annotation types (notes and links), and plug-ins can add new annotation handlers by using **AVAppRegisterAnnotHandler**.

Obtaining

AVAppGetAnnotHandlerByName
AVAppEnumAnnotHandlers

Enumerating

AVAppEnumAnnotHandlers

Attributes

Get	Set
AVAnnotHandlerGetInfo	**AVAnnotHandlerDeleteInfo**
AVAppGetAnnotHandlerByName	—

Cos conversion

None

Validity testing

None

Declarations

AVAnnotHandler

AVApp

The Acrobat viewer application itself. From the application layer, you can control the appearance of Acrobat, whether Acrobat appears, and the size of the application window. Your application has access to the menubar and the toolbar through this object. The application layer also provides access to the visual representation of a PDF file on the screen, that is, an **AVDoc**.

Obtaining

None

Enumerating

AVAppEnumActionHandlers
AVAppEnumAnnotHandlers
AVAppEnumDocs
AVAppEnumSystemFonts
AVAppEnumTools
AVAppEnumTransHandlers

Attributes

Get	Set
AVAppBeginModal	AVAppEndModal
AVAppCanQuit	—
AVAppDoingFullScreen	AVAppEndFullScreen
AVAppGetActionHandlerByType	AVAppRegisterActionHandler
AVAppGetActiveDoc	—
AVAppGetActiveTool	AVAppSetActiveTool
—	AVAppRegisterTool
AVAppGetAnnotHandlerByName	AVAppRegisterAnnotHandler
—	AVAppRegisterForPageViewAdjustCursor
—	AVAppUnregisterForPageViewAdjustCursor
—	AVAppRegisterForPageViewClicks
—	AVAppUnregisterForPageViewClicks
—	AVAppRegisterForPageViewDrawing
—	AVAppUnregisterForPageViewDrawing

Get	Set
—	AVAppRegisterIdleProc
—	AVAppUnregisterIdleProc
—	AVAppRegisterNotification
—	AVAppUnregisterNotification
AVAppGetCancelProc	—
AVAppGetDefaultTool	—
AVAppGetDocProgressMonitor	—
AVAppGetLanguage	—
AVAppGetLastActiveTool	—
AVAppGetMenubar	—
AVAppGetName	—
AVAppGetNumDocs	—
AVAppGetPreference	AVAppSetPreference
AVAppGetReportProc	—
AVAppGetToolBar	—
AVAppGetToolByName	—
AVAppGetTransHandlerByType	—
AVAppGetVersion	—
AVAppHandlePlatformEvent	—
AVAppModalWindowIsOpen	—
AVHasAuxDataHandler	AVRegisterAuxDataHandler
—	AVUnregisterAuxDataHandler

Cos conversion

None

Validity testing

None

Declarations

None

AVCommand

An **AVCommand** represents an action that the user can perform on the current document or the current selection in the current document. Specifically, an **AVCommand** represents a command which can be added to a command sequence and executed either interactively or via batch processing. Commands can be executed with **AVCommandExecute**; commands can be cancelled with **AVCommandCancel**.

Obtaining:

AVCommandNew

Disposing:

AVCommandDestroy

Attributes

Get	Set
AVCommandGetAVDoc	—
AVCommandGetCab	**AVCommandPutCab**
AVCommandGetCancelProc	—
AVCommandGetConfig	**AVCommandSetConfig**
AVCommandGetInputs	**AVCommandSetInputs**
AVCommandGetName	—
AVCommandGetParams	**AVCommandSetParams**
AVCommandGetPDDoc	—
AVCommandGetProgressMonitor	—
AVCommandGetProps	—
AVCommandGetReportProc	—
AVCommandGetStatus	—
AVCommandGetUIPolicy	—

Cos conversion

None

Validity testing

None

Declarations

None

AVDoc

A view of a PDF document in a window. There is one **AVDoc** per displayed document. Unlike a **PDDoc**, an **AVDoc** has a window associated with it.

Obtaining:

AVAppGetActiveDoc
AVAppEnumDocs
AVDocOpenFromASFileWithParams
AVDocOpenFromFile
AVDocOpenFromFileWithParams
AVDocOpenFromPDDoc
AVDocOpenFromPDDocWithParams
AVPageViewGetAVDoc

Disposing

AVDocClose

Enumerating

AVAppEnumDocs
AVDocEnumSelection

Attributes

Get	Set
—	AVDocDoActionPropsDialog
—	AVDocDoCopyAs
—	AVDocDoPrint
—	AVDocDoSaveAs
—	AVDocDoSaveAsWithParams
—	AVDocDoSelectionProperties
AVDocGetAVWindow	—
AVDocGetClientName	AVDocSetClientName
AVDocGetPageText	—
AVDocGetPageView	—
AVDocGetPDDoc	—
—	AVDocClearSelection

Get	Set
—	AVDocDeleteSelection
—	AVDocShowSelection
AVDocGetSelection	AVDocSetSelection
AVDocGetSelectionServerByType	—
AVDocGetSelectionType	—
AVDocGetSplitterPosition	AVDocSetSplitterPosition
AVDocGetViewDef	AVDocSetViewDef
AVDocGetViewMode	AVDocSetViewMode
AVDocIsExternal	—
—	AVDocPerformAction
—	AVDocRegisterSelectionServer
—	AVDocSetDead
AVDocIsReadOnly	AVDocSetReadOnly

Cos conversion

None

Validity testing

None

Declarations

AVDocOpenParams
AVDocPrintParams
AVDocSelectionServer
AVDocViewDef

AVGrafSelect

A graphics selection on a page in a PDF file. It is a rectangular region of a page that can be copied to the clipboard as a sampled image.

Obtaining

AVDocGetSelection
AVGrafSelectCreate

Disposing

AVGrafSelectDestroy

Attributes

Get	Set
AVGrafSelectGetBoundingRect	—

Cos conversion

None

Validity testing

None

Declarations

None

AVMenu

A menu in the Acrobat viewer's menubar. Plug-ins can create new menus, add menu items at any location in any menu, and remove menu items. Deleting an **AVMenu** removes it from the menubar (if it was attached) and deletes all the menu items it contains.

Obtaining

AVMenuAcquire
AVMenuNew
AVMenuItemAcquireSubmenu
AVMenuItemGetParentMenu
AVMenubarAcquireMenuByName
AVMenubarAcquireMenuByIndex
AVMenubarAcquireMenuByPredicate

Disposing

AVMenuRelease
AVMenuRemove

Attributes

Get	Set
—	**AVMenuAddMenuItem**
AVMenuGetMenuItemIndex	—
AVMenuGetName	—
AVMenuGetNumMenuItems	—
AVMenuGetParentMenubar	—
AVMenuGetParentMenuItem	—
AVMenuGetTitle	—

Cos conversion

None

Validity testing

None

Declarations

None

AVMenubar

The Acrobat viewer's menubar and a list of all menus. There is only one **AVMenubar**. Plug-ins can add new menus to or remove any menu from the menubar. The menubar can be hidden from the user's view.

Obtaining

AVAppGetMenubar
AVMenuGetParentMenubar

AVAppGetMenubar is the standard way to obtain the menubar.

Attributes:

Get	Set
—	**AVMenubarAddMenu**
—	**AVMenuRemove**
AVMenubarAcquireMenuByIndex	—
AVMenubarAcquireMenuByName	—
AVMenubarAcquireMenuByPredicate	—
AVMenubarAcquireMenuItemByName	—
AVMenubarAcquireMenuItemByPredicate	—
AVMenubarGetMenuIndex	—
AVMenubarGetNumMenus	—
AVMenuItemRemove	—
—	**AVMenubarHide**
—	**AVMenubarShow**

Cos conversion

None

Validity testing

None

Declarations

None

AVMenuItem

A menu item under a menu in the Acrobat viewer. It has a number of attributes, including a name, a keyboard shortcut, a procedure to execute when the menu item is selected, a procedure to compute whether or not the menu item is enabled, a procedure to compute whether or not the menu item is check marked, and whether or not it has a submenu.

Obtaining

AVMenuItemNew
AVMenuItemAcquire
AVMenubarAcquireMenuByName
AVMenubarAcquireMenuItemByPredicate
AVMenuAcquireMenuItemByIndex
AVMenuGetParentMenuItem

Disposing

AVMenuItemRelease
AVMenuItemRemove

Attributes

Get	Set
AVMenuGetMenuItemIndex	—
AVMenuItemAcquireSubmenu	—
AVMenuItemGetLongOnly	—
AVMenuItemGetName	—
AVMenuItemGetParentMenu	—
AVMenuItemGetShortcut	—
AVMenuItemGetTitle	**AVMenuItemSetTitle**
AVMenuItemIsEnabled	—
AVMenuItemIsMarked	—
—	**AVMenuItemSetComputeEnabledProc**
—	**AVMenuItemSetComputeMarkedProc**
—	**AVMenuItemSetExecuteProc**

Cos conversion

None

Validity testing

None

Declarations

None

AVPageView

The area of the Acrobat viewer's window that displays the contents of a document page. Every **AVDoc** has an **AVPageView** and vice versa. It contains references to the **PDDoc** and **PDPage** objects for the document being displayed.

Obtaining

AVDocGetPageView

Attributes

Get	Set
AVPageViewAppearanceGetAVMatrix	—
AVPageViewAcquireMachinePort	AVPageViewReleaseMachinePort
AVPageViewGetActiveBead	—
AVPageViewGetAnnotRect	—
—	AVPageViewSetAnnotLocation
AVPageViewGetAperture	—
AVPageViewGetAVDoc	—
AVPageViewGetColor	AVPageViewSetColor
—	AVPageViewShowControl
AVPageViewGetDevToPageMatrix	—
AVPageViewGetFirstVisiblePageNum	—
AVPageViewGetFocusAnnot	AVPageViewSetFocusAnnot
AVPageViewGetLastVisiblePageNum	—
AVPageViewGetLayoutMode	AVPageViewSetLayoutMode
AVPageViewGetMousePosition	—
AVPageViewGetMousePositionSnapped	—
AVPageViewGetNextView	—
AVPageViewGetPage	—
AVPageViewGetPageNum	AVPageViewSetPageNum
—	AVPageViewGoBack

Get	Set
—	AVPageViewGoForward
—	AVPageViewGoTo
AVPageViewGetPageToDevMatrix	—
AVPageViewGetSelectedAnnotPageNum	—
AVPageViewGetThreadIndex	—
AVPageViewGetVisibleAnnotPage	—
AVPageViewGetZoom	AVPageViewZoomTo
AVPageViewGetZoomType	—
—	AVPageViewDeviceRectToPageRZ
—	AVPageViewDrawCosObj
—	AVPageViewDragRect
—	AVPageViewDrawNow
—	AVPageViewDrawRect
—	AVPageViewDrawRectOutline
—	AVPageViewHighlightText
—	AVPageViewInsetRect
—	AVPageViewInvalidateRect
—	AVPageViewInvalidateText
—	AVPageViewInvertRect
—	AVPageViewInvertRectOutline
AVPageViewInvertQuad	—
AVPageViewIsBeadAtPoint	—
AVPageViewPageNumIsVisible	—
AVPageViewPointInText	—
—	AVPageViewReadPageDown
—	AVPageViewReadPageUp

Get	Set
—	**AVPageViewScrollTo**
—	**AVPageViewScrollToRect**
—	**AVPageViewSetAnnotLocation**
AVPageViewToDestInfo	**AVPageViewUseDestInfo**
AVPageViewToViewDest	**AVPageViewUseThisDestination**

Cos conversion

None

Validity testing

None

Declarations

None

AVSweetPea

The Sweet Pea methods are used to implement the Adobe Dialog Manager (ADM). See *Using ADM In Acrobat*.

Obtaining

None

Attributes

Get	Set
AVSweetPeaGetBasicSuiteP	—
AVSweetPeaGetPluginRef	—
AVSweetPeaGetResourceAccess	**AVSweetPeaSetResourceAccess**

Cos conversion

None

Validity testing

None

Declarations

See *Using ADM In Acrobat*.

AVSys

Provides various system-wide utilities, including setting the cursor shape and beeping.

Obtaining

None

Attributes

Get	Set
AVSysGetCursor	AVSysSetCursor
—	AVSysSetWaitCursor
AVSysGetModifiers	—
AVSysGetStandardCursor	—
AVSysMouseIsStillDown	—

Cos conversion

None

Validity testing

None

Declarations

None

AVTool

Handles key presses and mouse clicks in the content region of an **AVPageView**. **AVTool**s do not handle mouse clicks in other parts of the viewer's window, such as in the bookmark pane. At any time, there is one active tool.

Obtaining

AVAppGetActiveTool
AVAppGetLastActiveTool
AVAppGetDefaultTool
AVAppGetToolByName
AVAppEnumTools

Enumerating

AVAppEnumTools

Attributes

Get	Set
AVToolGetType	—
AVToolIsPersistent	—

Cos conversion

None

Validity testing

None

Declarations

AVTool

AVToolBar

The Acrobat viewer's toolbar (the palette of buttons).

Obtaining

AVAppGetToolBar
AVToolBarNew
AVToolBarNewFlyout
AVToolButtonGetFlyout

Attributes

Get	Set
AVToolBarGetButtonByName	—
AVToolBarGetFrame	—
AVToolBarGetNumButtons	—
AVToolBarIsRoomFor	—
—	**AVToolBarAddButton**
—	**AVToolBarUpdateButtonStates**
—	**AVToolButtonDestroy**
—	**AVToolButtonRemove**
—	**AVToolButtonSetExternal**

Cos conversion

None

Validity testing

None

Declarations

None

AVToolButton

A button in the Acrobat viewer's toolbar. Like menu items, the procedure that executes when the button is clicked can be set by a plug-in. Although not required, there is generally a menu item corresponding to each button, allowing users to select a function using either the button or the menu item. Buttons are added to the toolbar by specifying which existing button they appear before or after.

Obtaining

AVToolBarGetButtonByName
AVToolButtonNew
AVToolBarEnumButtons

Disposing

AVToolButtonDestroy
AVToolButtonRemove

Enumerating

AVToolBarEnumButtons

Attributes

Get	Set
AVToolButtonGetFlyout	**AVToolButtonSetFlyout**
AVToolButtonGetIcon	**AVToolButtonSetIcon**
AVToolButtonGetMenu	**AVToolButtonSetMenu**
AVToolButtonIsEnabled	—
AVToolButtonIsMarked	—
AVToolButtonIsSeparator	—
—	**AVToolButtonSetComputeEnabledProc**
—	**AVToolButtonSetComputeMarkedProc**
—	**AVToolButtonSetExecuteProc**
—	**AVToolButtonSetExternal**
—	**AVToolButtonSetHelpText**

Cos conversion

None

Validity testing

None

Declarations

`Tool Button Flags`

AVWindow

Creates and manages windows. Plug-ins should use **AVWindows** for their own dialogs, floating palettes, and so forth, to ensure that those windows work well with the Acrobat viewer. For example, under Windows they are hidden when the Acrobat viewer is turned into an icon. Once the plug-in creates an **AVWindow**, it is free to use platform-dependent code to put whatever it wants in the window.

Obtaining

AVWindowNew
AVWindowNewFromPlatformThing
AVDocGetAVWindow

Disposing

AVWindowDestroy
AVWindowUserClose

Attributes

Get	Set
—	AVWindowDrawNow
AVWindowGetFrame	AVWindowSetFrame
AVWindowGetInterior	—
AVWindowGetOwnerData	AVWindowSetOwnerData
AVWindowGetPlatformThing	—
AVWindowGetTitle	AVWindowSetTitle
AVWindowIsKey	AVWindowBecomeKey
—	AVWindowSetWantsKey
—	AVWindowResignKey
—	AVWindowBringToFront
AVWindowIsVisible	AVWindowShow
—	AVWindowHide
—	AVWindowInvalidateRect
—	AVWindowMaximize

Cos conversion

None

Validity testing

None

Declarations

AVWindow Flags
AVWindowHandler
AVWindowLayer

Cos Layer

A set of objects that provide access to the building blocks used to construct documents. Its methods allow applications to manipulate the low-end data in a PDF file, such as strings, numbers, and dictionaries.

CosDoc

A Cos level representation of an entire PDF file.

Obtaining

CosDocCreate
CosDocOpenWithParams
CosObjGetDoc
PDDocGetCosDoc

Attributes

Get	Set
—	**CosDocClose**
CosDocGetID	—
CosDocGetInfoDict	—
CosDocGetObjByID	—
—	**CosDocSaveToFile**
—	**CosDocSaveWithParams**
—	**CosDocSetDirty**

Cos conversion

See the list of “Obtaining” methods.

Validity testing

None

Declarations

CosDocCreate Flags
CosDocSave Flags
CosDocSaveParams

CosObj

A general object in a PDF file, which may be of any Cos object type.

Obtaining

CosArrayGet
CosDictGet
CosDocGetInfoDict
CosDocGetObjByID
CosNewBoolean
CosNewDict
CosNewFixed
CosNewInteger
CosNewName
CosNewNull
CosNewStream
CosNewString
CosStreamDict
PDActionGetCosObj
PDAnnotGetCosObj
PDBeadGetCosObj
PDBookmarkGetCosObj
PDCharProcGetCosObj
PDFileSpecGetCosObj
PDFontGetCosObj
PDFormGetXUIDCosObj
PDNameTreeGetCosObj
PDPageGetCosObj
PDPageGetCosResources
PDPageLabelGetCosObj
PDThreadGetCosObj
PDTransGetCosObj
PDViewDestGetCosObj
PDXObjectGetCosObj

Disposing

CosObjDestroy

Enumerating

CosObjEnum

Attributes

Get	Set
CosArrayGet	CosArrayInsert

Get	Set
CosArrayLength	CosArrayPut
CosArrayRemoveNth	
—	CosArrayRemove
CosBooleanValue	—
CosDictGet	—
CosDictKnown	CosDictPut
—	CosDictRemove
CosDocGetObjByID	—
CosFixedValue	—
CosIntegerValue	—
CosNameValue	—
CosObjEqual	—
CosObjGetDoc	—
CosObjGetGeneration	—
CosStringGetHexFlag	CosStringSetHexFlag
CosObjGetID	—
CosDocGetObjByID	—
CosObjHash	—
CosObjIsIndirect	—
CosStreamDict	—
CosStreamLength	—
CosStreamPos	—
CosStringValue	—

Cos conversion

See “Cos conversion” for each object

Validity testing

None

Declarations

Cos Object Types

PD Layer

A group of objects that provide access to components of PDF documents such as pages, annotations, and fonts. Its methods allow applications to manipulate document components.

PDAction

Actions are what happens when a user clicks on a link or bookmark. In addition, the Acrobat viewer allows a document to have an action that is executed automatically when the document is opened. Applications can also support actions in custom annotation types they add.

Obtaining

PDActionNew
PDActionNewFromDest
PDActionNewFromFileSpec
PDLinkAnnotGetAction
PDBookmarkGetAction
PDDocGetOpenAction

Disposing

PDActionDestroy

Attributes

Get	Set
PDActionEqual	—
PDActionGetDest	—
PDActionGetFileSpec	—
PDActionGetSubtype	—

Cos conversion

PDActionGetCosObj
PDActionFromCosObj

Validity testing

PDActionIsValid

Declarations

None

PDAnnot

An annotation on a page in a PDF file. Acrobat viewers have two built-in annotation types: **PDTextAnnot** and **PDLinkAnnot**. Physical attributes of the annotation can be set and queried. Plug-in's add movie and Widget (form field) annotations. Developers can define new annotation subtypes by creating new annotation handlers.

Obtaining

AVPageViewIsAnnotAtPoint
PDAnnotFromCosObj
PDPageAddNewAnnot
PDPageCreateAnnot
PDPageGetAnnot

Disposing

PDPageRemoveAnnot

Attributes

Get	Set
AVPageViewGetSelectedAnnotPageNum	—
—	AVPageViewSetAnnotLocation
PDAnnotEqual	—
PDAnnotGetColor	PDAnnotSetColor
PDAnnotGetDate	PDAnnotSetDate
PDAnnotGetFlags	PDAnnotSetFlags
PDAnnotGetRect	PDAnnotSetRect
PDAnnotGetSubtype	—
PDAnnotGetTitle	PDAnnotSetTitle

Cos conversion

PDAnnotGetCosObj
PDAnnotFromCosObj

Validity testing

PDAnnotIsValid

Declarations

PDAnnot Flags

PDBead

A single rectangle in an article thread. (Article threads are known simply as articles in the Acrobat viewer's user interface.) A bead remains valid as long as a thread is "current and active."

Obtaining

AVPageViewGetActiveBead
AVPageViewIsBeadAtPoint
PDBeadNew
PDBeadGetNext
PDBeadGetPrev
PDThreadGetFirstBead

Disposing

PDBeadDestroy

Attributes

Get	Set
PDBeadGetIndex	—
PDBeadGetNext	—
PDBeadGetPrev	—
PDBeadGetRect	**PDBeadSetRect**
PDBeadGetThread	—
PDBeadIsValid	—
—	**PDBeadSetPage**

Cos conversion

PDBeadGetCosObj
PDBeadFromCosObj

Validity testing

PDBeadIsValid

Declarations

None

PDBookmark

A bookmark on a page in a PDF file. Each bookmark has a title that appears on screen, and an action that specifies what happens when a user clicks on the bookmark. Bookmarks can either be created interactively by the user through the Acrobat viewer's user interface or programmatically generated. The typical action for a user-created bookmark is to move to another location in the current document, although any action (see **PDAction**) can be specified.

Obtaining

PDDocGetBookmarkRoot
PDBookmarkAddNewSibling
PDBookmarkAddNewChild
PDBookmarkFromCosObj
PDBookmarkGetByTitle
PDBookmarkGetParent
PDBookmarkGetFirstChild
PDBookmarkGetLastChild
PDBookmarkGetNext
PDBookmarkGetPrev

Disposing

PDBookmarkDestroy
PDBookmarkUnlink

Attributes

Get	Set
PDBookmarkEqual	—
PDBookmarkGetAction	**PDBookmarkSetAction** **PDBookmarkRemoveAction**
PDBookmarkGetColor	**PDBookmarkSetColor**
PDBookmarkGetCount	—
PDBookmarkGetFirstChild	**PDBookmarkAddChild**, **PDBookmarkAddNewChild**
PDBookmarkGetFlags	**PDBookmarkSetFlags**
PDBookmarkGetIndent	—
PDBookmarkGetLastChild	**PDBookmarkAddChild**, **PDBookmarkAddNewChild**

Get	Set
PDBookmarkGetNext	PDBookmarkAddNext, PDBookmarkAddNewSibling
PDBookmarkGetParent	PDBookmarkAddSubtree
PDBookmarkGetPrev	PDBookmarkAddPrev, PDBookmarkAddNewSibling
PDBookmarkGetTitle	PDBookmarkSetTitle
PDBookmarkHasChildren	—
PDBookmarkIsOpen	PDBookmarkSetOpen

Cos conversion

PDBookmarkGetCosObj
PDBookmarkFromCosObj

Validity testing

PDBookmarkIsValid

Declarations

None

PDCharProc

A character procedure, a stream of graphic operators (see **PDGraphic**) that draw a particular glyph of a Type 3 PostScript font.

Obtaining

None

Enumerating

PDCharProcEnum
PDFontEnumCharProcs

Attributes

None

Cos conversion

PDCharProcGetCosObj

Validity testing

None

Declarations

None

PDDoc

The underlying PDF representation of a document. There is a correspondence between a **PDDoc** and an **ASFile**; the **PDDoc** object is the hidden object behind every **AVDoc.** An **ASFile** may have zero or more underlying files, so a PDF file does not always correspond to a single disk file. For example, an **ASFile** may provide access to PDF data in a database.

Through **PDDocs**, your application can perform most of the Edit -> Pages menu items from Acrobat (delete, replace, and so on). Thumbnails can be created and deleted through this object. You can set and retrieve document information fields through this object as well. The first page in a **PDDoc** is page 0.

Obtaining

AVDocGetPDDoc
PDDocFromCosDoc
PDDocOpen
PDDocOpenFromASFile
PDDocOpenWithParams
PDDocCreate
PDPageGetDoc
PDFileSpecGetDoc
PDEnumDocs

Disposing

PDDocClose
PDDocRelease

Enumerating

PDDocEnumFonts
PDDocEnumLoadedFonts
PDEnumDocs

Attributes

Get	Set
AVAuthOpen	—
—	**PDDocAcquire**
PDDocAcquirePage	**PDDocCreatePage**, **PDDocDeletePages**, **PDDocImportNotes**, **PDDocMovePage**, **PDDocReplacePages**

Get	Set
—	PDDocAuthorize
PDDocExportNotes	—
PDDocGetCryptHandlerClientData	—
PDDocGetFile	—
PDDocGetFlags	PDDocClearFlags, PDDocSetFlags
PDDocGetFullScreen	PDDocSetFullScreen
PDDocGetID	—
PDDocGetInfo	PDDocSetInfo
PDDocGetLabelForPageNum	PDDocRemovePageLabel
PDDocGetNameTree	PDDocRemoveNameTree
PDDocGetNewCryptHandler	PDDocSetNewCryptHandler
PDDocGetNewSecurityData	PDDocNewSecurityData, PDDocSetNewSecurityData
PDDocGetNewSecurityInfo	—
PDDocGetNumPages	—
PDDocGetNumThreads	—
PDDocGetOpenAction	PDDocSetOpenAction PDDocRemoveOpenAction
PDDocGetPageLabel	PDDocSetPageLabel
PDDocGetPageObjByNum	—
PDDocFindPageNumForLabel	—
PDDocGetPageMode	PDDocSetPageMode
PDDocGetPermissions	PDDocAuthorize
PDDocGetSecurityData	—
PDDocGetStructTreeRoot	PDDocRemoveStructTreeRoot, PDDocCreateStructTreeRoot

Get	Set
PDDocGetThread	PDDocAddThread, PDDocRemoveThread
PDDocGetThreadIndex	—
—	PDDocCreateThumbs, PDDocDeleteThumbs
PDDocGetWordFinder	PDDocCreateWordFinder, PDDocCreateWordFinderUCS, PDWordFinderDestroy
PDDocGetXAPMetadata	PDDocSetXAPMetadata
PDDocGetVersion	—
—	PDDocSave, PDDocSaveWithParams

Cos Conversion

PDDocGetCosDoc
PDDocFromCosDoc

Validity testing

None

Declarations

PDDocFlags
PDDocReadAhead Flags
PDDocSaveParams

PDFileSpec

The PDF file specification object. It is used to specify a file in an action (see **PDAction**). A file specification in a PDF file can take two forms:

- A single platform-independent pathname.
- A data structure containing one or more alternative ways to locate the file on different platforms.

PDFileSpecs can be created from **ASPathNames** or from Cos objects.

Obtaining

PDActionGetFileSpec
PDFileSpecNewFromASPath
PDFileSpecFromCosObj

Attributes

Get	Set
PDFileSpecAcquireASPath	—
PDFileSpecGetDIPath	—
PDFileSpecGetDoc	—
PDFileSpecGetFileSys	—
PDFileSpecGetFileSysName	—

Cos conversion

PDFileSpecGetCosObj
PDFileSpecFromCosObj

Validity testing

PDFileSpecIsValid

Declarations

PDFileSpecHandler

PDFont

A font that is used to draw text on a page. It corresponds to a Font Resource in a PDF file. Applications can get a list of **PDFont**s used on a **PDPage** or a range of **PDPage**s. More than one **PDPage** may reference the same **PDFont** object.

A **PDFont** has a number of attributes whose values can be read or set, including an array of widths, the character encoding, and the font's resource name.

Obtaining

PDDocEnumFonts
PDDocEnumLoadedFonts
PDFontGetDescendant
PDStyleGetFont

Enumerating

PDDocEnumFonts
PDFontEnumCharProcs

Attributes

Get	Set
PDFontAcquireEncodingArray	**PDFontEncodingArrayRelease**
PDFontAcquireXlateTable	**PDFontXlateTableRelease**
PDFontGetBBox	—
PDFontGetCharSet	—
PDFontGetCIDSystemInfo	—
PDFontGetCIDSystemSupplement	—
PDFontGetDescendant	—
PDFontGetEncodingIndex	—
PDFontGetEncodingName	—
PDFontGetFontMatrix	—
PDFontGetMetrics	**PDFontSetMetrics**
PDFontGetName	—
PDFontGetSubtype	—
PDFontGetWidths	—

Get	Set
PDFontIsEmbedded	—

Cos conversion

PDFontGetCosObj

Validity testing

None

Declarations

None

PDForm

A self-contained set of graphics operators (essentially a subroutine of PDF page-marking operators) that is used when a particular graphic is drawn more than once in the document. It corresponds to a Form resource. You can use any **PDXObject** method on a **PDImage**.

Obtaining

None

Enumerating

PDFormEnumPaintProc
PDFormEnumResources

Attributes

Get	Set
PDFormGetBBox	—
PDFormGetFormType	—
PDFormGetMatrix	—
PDFormGetXUIDCosObj	—

Cos Conversion

PDXObjectGetCosObj

Validity testing

None

Declarations

None

PDGraphic

All graphic objects that comprise page, charproc, and **PDForm** descriptions.

Obtaining

None

Attributes

Get	Set
PDGraphicGetBBox	—
PDGraphicGetCurrentMatrix	—
PDGraphicGetState	—

Cos Conversion

None

Validity testing

None

Declarations

PDGraphicEnumMonitor

PDImage

A sampled image or image mask that corresponds to a PDF Image resource. You can use any **PDXObject** method on a **PDImage**.

Obtaining

None

Attributes

Get	Set
PDImageColorSpaceGetIndexLookup	—
PDImageGetAttrs	—

Cos Conversion

PDXObjectGetCosObj

Validity testing

None

Declarations

None

PDInlineImage

An image whose data is stored in the page description's contents stream—instead of being stored as an image resource (see **PDImage**).

Obtaining

None

Attributes

Get	Set
PDInlineImageColorSpaceGetIndexLookup	—
PDInlineImageGetAttrs	—
PDInlineImageGetData	—

Cos conversion

None

Validity testing

None

Declarations

None

PDLinkAnnot

A link annotation on a page in a PDF file. You can use any **PDAnnot** method on a **PDLinkAnnot**. Applications can:

- Get and set the bounding rectangle and color, using **PDAnnot** methods.
- Get and set the action that occurs when the link is activated, and the link's border, using **PDLinkAnnot** methods.
- Create new link annotations and delete existing ones, using the **PDPage** methods.

Obtaining:

Any of the **PDAnnot** calls, followed by **CastToPDLinkAnnot**. The annotation passed to **CastToPDLinkAnnot** must be a link annotation: other annotation types are not converted into link annotations.

Disposing

PDPageRemoveAnnot

Attributes

Get	Set
PDLinkAnnotGetAction	**PDLinkAnnotSetAction**
PDLinkAnnotGetBorder	**PDLinkAnnotSetBorder**
AVPageViewGetSelectedAnnotPageNum	—
—	**AVPageViewSetAnnotLocation**
PDAnnotEqual	—
PDAnnotGetColor	**PDAnnotSetColor**
PDAnnotGetDate	**PDAnnotSetDate**
PDAnnotGetFlags	**PDAnnotSetFlags**
PDAnnotGetRect	**PDAnnotSetRect**
PDAnnotGetSubtype	—
PDAnnotGetTitle	**PDAnnotSetTitle**

Cos conversion

PDAnnotGetCosObj
PDAnnotFromCosObj

Validity testing

PDAnnotIsValid

Declarations

PDLinkAnnotBorder

PDNameTree

The dictionary used to store all of the Named Destinations in a PDF file. A name tree is used to map Cos strings to Cos objects just as a Cos dictionary is used to map Cos names to Cos objects. However, a name tree can have many more entries than a Cos dictionary can. You create a **PDNameTree** and locate it where you think is appropriate (perhaps under a page, but most often right under the catalog).

Name trees use Cos-style strings (not null-terminated C strings), which may use Unicode encoding, and these may contain bytes with zeroes in them (high bytes of ASCII characters).

Obtaining

PDDocCreateNameTree
PDNameTreeNew
PDNameTreeFromCosObj

Disposing

None

Enumerating

PDNameTreeEnum

Attributes

Get	Set
PDDocGetNameTree	—
PDNameTreeEqual	—
PDNameTreeLookup	—
PDNameTreeGet	PDNameTreePut
—	PDNameTreeRemove

Cos conversion

PDNameTreeGetCosObj

Validity testing

PDNameTreeIsValid

Declarations

None

PDNumTree

An object that points to the root node of a number tree inside a PDF file. A number tree is used to map integers to arbitrary Cos objects just as a Cos dictionary is used to map Cos names to Cos objects. However, a number tree can have many more entries than a Cos dictionary can.

Obtaining

PDNumTreeNew
PDNumTreeFromCosObj

Disposing

None

Enumerating

PDNumTreeEnum

Attributes

Get	Set
PDNumTreeEqual	—
PDNumTreeGet	**PDNumTreePut**
—	**PDNumTreeRemove**

Cos conversion

PDNumTreeGetCosObj

Validity testing

PDNumTreeIsValid

Declarations

None

PDPage

A single page in the PDF representation of a document. Just as PDF files are partially composed of their pages, **PDDoc**s are composed of **PDPage**s. A page contains a series of objects representing the objects drawn on the page (**PDGraphic**), a list of resources used in drawing the page, annotations (**PDAnnot**), an optional thumbnail image of the page, and the beads used in any articles that occur on the page. The first page in a **PDDoc** is page 0.

Obtaining

PDDocCreatePage
PDBeadAcquirePage
PDDocAcquirePage
AVPageViewGetPage

Disposing

PDDocDeletePages
PDPageRelease

Enumerating (Obsolete in Acrobat 4.0)

PDPageEnumContents
PDPageEnumResources

Attributes

Get	Set
—	PDDocAcquirePage
PDPageGetAnnotIndex, PDPageGetAnnotSequence	PDPageAddAnnot, PDPageAddNewAnnot, PDPageCreateAnnot, PDPageRemoveAnnot
PDPageGetBBox	—
PDPageGetBox	PDPageSetBox
PDPageGetCosResources	PDPageAddCosResource, PDPageRemoveCosResource
PDPageDrawContentsToWindow	PDPageAddCosContents, PDPageRemoveCosContents
PDPageGetCropBox	PDPageSetCropBox
PDPageGetDefaultMatrix	—

Get	Set
PDPageGetDoc	—
PDPageGetDuration	PDPageSetDuration
PDPageGetFlippedMatrix	—
PDPageGetMediaBox	PDPageSetMediaBox
PDPageGetNumAnnots	—
PDPageGetNumber	—
PDPageGetPalette	—
PDPageGetRotate	PDPageSetRotate
PDPageGetTransition	PDPageSetTransition
PDPageHasTransition	—

Cos conversion

PDPageGetCosObj

Validity testing

None

Declarations

PDPageMode

PDPageLabel

A label used to describe a page. This is used to allow for non-sequential page numbering or the addition of arbitrary labels for a page (such as the inclusion of Roman numerals at the beginning of a book). A **PDPageLabel** specifies the numbering style to use (for example, upper- or lower-case Roman, decimal, and so forth), the starting number for the first page, and an arbitrary prefix to be pre-appended to each number (for example, “A-” to generate “A-1”, “A-2”, “A-3”, and so forth.)

Obtaining

PDDocGetPageLabel
PDDocGetLabelForPageNum
PDPageLabelFromCosObj
PDPageLabelNew

Disposing

PDDocRemovePageLabel

Attributes

Get	Set
PDPageLabelEqual	—
—	**PDDocSetPageLabel**, **PDDocRemovePageLabel**
PDPageLabelGetStyle	—
PDPageLabelGetPrefix	—
PDPageLabelGetStart	—
PDDocFindPageNumForLabel	—

Cos conversion

PDPageLabelGetCosObj

Validity testing

PDPageLabelIsValid

Declarations

None

PDPath

A **PDPath** is a graphic object representing a path in a page description. Paths are arbitrary shapes made of straight lines, rectangles, and cubic curves. Path objects can be stroked, filled, and/or serve as a clipping path.

Obtaining

None

Enumerating

PDPathEnum

Attributes

Get	Set
PDPathGetPaintOp	—

Cos conversion

None

Validity testing

None

Declarations

PDPathEnumMonitor
PDPathPaintOp

PDStyle

Provides access to information about the fonts, font sizes, and colors used in a **PDWord**.

Obtaining

PDWordGetNthCharStyle

Attributes

Get	Set
PDStyleGetColor	—
PDStyleGetFont	—
PDStyleGetFontSize	—

Cos conversion

None

Validity testing

None

PDText

A graphic object representing one or more character strings on a page in a PDF file. Like paths, text can be stroked, filled, and/or serve as a clipping path.

Obtaining

None

Enumerating

`PDTextEnum`

Attributes

Get	Set
`PDTextGetState`	—

Cos conversion

None

Validity testing

None

PDTextAnnot

A PDF text annotation on a page in a PDF file. You can use any **PDAnnot** method on a **PDTextAnnot**.

Applications can:

- Get and set attributes including the rectangle, textual contents, and whether or not the annotation is open.
- Create new text annotations and delete or move existing ones using **PDAnnot** methods.
- Manipulate the behavior of text annotations by modifying the Text Annotation Handler.

Obtaining

Any of the **PDAnnot** calls, followed by **CastToPDTextAnnot.** The annotation passed to **CastToPDTextAnnot** must be a text annotation, it will not convert other annotation types into text annotations.

Disposing

PDPageRemoveAnnot

Attributes

Get	Set
PDTextAnnotGetContents	**PDTextAnnotSetContents**
PDTextAnnotIsOpen	**PDTextAnnotSetOpen**
AVPageViewGetSelectedAnnotPageNum	—
—	**AVPageViewSetAnnotLocation**
PDAnnotEqual	—
PDAnnotGetColor	**PDAnnotSetColor**
PDAnnotGetDate	**PDAnnotSetDate**
PDAnnotGetFlags	**PDAnnotSetFlags**
PDAnnotGetRect	**PDAnnotSetRect**
PDAnnotGetSubtype	—
PDAnnotGetTitle	**PDAnnotSetTitle**

Cos conversion

PDAnnotGetCosObj
PDAnnotFromCosObj

Validity testing

PDAnnotIsValid

PDTextSelect

A selection of text on a single page, and may contain more than one disjoint group of words. A text selection is specified by one or more *ranges* of text, with each range containing the word numbers of the selected words. Each range specifies a start and end word, where “start” is the first of a series of selected words and “end” is the first word *not* in the series.

Obtaining

AVDocGetSelection
AVPageViewTrackText
PDDocCreateTextSelect
PDTextSelectCreatePageHilite
PDTextSelectCreatePageHiliteEx
PDTextSelectCreateWordHilite
PDTextSelectCreateWordHiliteEx
PDTextSelectCreateRanges
PDTextSelectCreateRangesEx

Disposing

PDTextSelectDestroy

Enumerating

PDTextSelectEnumQuads
PDTextSelectEnumText

Attributes

Get	Set
—	PDTextSelectCreatePageHilite
	PDTextSelectCreatePageHiliteEx
—	PDTextSelectCreateRanges
	PDTextSelectCreateRangesEx
—	PDTextSelectCreateWordHilite
	PDTextSelectCreateWordHiliteEx
PDTextSelectGetBoundingRect	PDTextSelectGetBoundingRect
PDTextSelectGetPage	—
PDTextSelectGetRange	—
PDTextSelectGetRangeCount	—

Cos conversion

None

Validity testing

None

Declarations

PDTextSelectRange

PDThread

An article in the Acrobat viewer's user interface, and contains an ordered sequence of rectangles that bound the article. Each rectangle is called a *bead*. Threads can be created interactively by the user, or programmatically.

Obtaining

PDDocGetThread
PDThreadNew
PDThreadFromCosObj
PDBeadGetThread

Disposing

PDDocRemoveThread
PDThreadDestroy

Attributes

Get	Set
PDThreadGetFirstBead	**PDThreadSetFirstBead**
PDThreadGetInfo	**PDThreadSetInfo**
—	**PDBeadInsert**

Cos conversion

PDThreadGetCosObj
PDThreadFromCosObj

Validity testing

PDThreadIsValid

Declarations

None

PDThumb

A thumbnail preview image of a page.

Obtaining

PDDocCreateThumbs

Disposing

PDDocDeleteThumbs

Attributes

None

Cos conversion

None

Validity testing

None

Declarations

PDThumbCreationServer

PDTrans

A transition to a page. The **Trans** key in a Page dictionary specifies a Transition dictionary, which describes the effect to use when going to a page and the amount of time the transition should take.

Obtaining

PDPageGetTransition
PDTransFromCosObj
PDTransNew
PDTransNewFromCosDoc
PDTransNull

Attributes

Get	Set
PDTransEqual	—
PDTransGetDuration	—
PDTransGetSubtype	—

Cos conversion

PDTransFromCosObj
PDTransGetCosObj

Validity testing

PDTransIsValid

Declarations

Transition Duration

PDViewDestination

A particular view of a page in a document. It contains a reference to a page, a rectangle on that page, and information specifying how to adjust the view to fit the window's size and shape. It corresponds to a PDF Dest array and can be considered a special form of a **PDAction**.

Obtaining

AVPageViewToViewDest
PDActionGetDest
PDViewDestCreate
PDViewDestFromCosObj
PDViewDestResolve

Disposing

PDViewDestDestroy

Attributes

Get	Set
PDViewDestGetAttr	—

Cos Conversion

PDViewDestFromCosObj
PDViewDestGetCosObj

Validity testing

PDViewDestIsValid

Declarations

None

PDWord

A word in a PDF file. Each word contains a sequence of characters in one or more styles (see **PDStyle**).

Obtaining

PDWordFinderGetNthWord
PDWordFinderEnumWords

Enumerating

PDWordFinderEnumWords

Attributes

Get	Set
PDWordGetAttr	—
PDWordGetCharacterTypes	—
PDWordGetCharDelta	—
PDWordGetCharOffset	—
PDWordGetLength	—
PDWordGetNthCharStyle	—
PDWordGetNthQuad	—
PDWordGetNumQuads	—
PDWordGetString	—
PDWordGetStyleTransition	—
PDWordIsRotated	—

Cos Conversion

None

Validity testing

None

Declarations

Word Attributes

PDWordFinder

Extracts words from a PDF file, and enumerates the words on a single page or on all pages in a document.

Obtaining

PDDocCreateWordFinder
PDDocCreateWordFinderUCS
PDDocGetWordFinder

Disposing

PDWordFinderDestroy

Enumerating

PDWordFinderEnumWords

Attributes

Get	Set
PDWordFinderAcquireWordList	**PDWordFinderReleaseWordList**
PDWordFinderGetLatestAlgVersion	—
PDWordFinderGetNthWord	—

Cos Conversion

None

Validity testing

None

Declarations

Word Finder Sort Order Flags

PDXObject

A superclass used for PDF XObjects. Acrobat currently uses two XObject subclasses: **PDImage** and **PDForm**. You can use any **PDXObject** method on these three objects.

Obtaining

None

Enumerating

PDXObjectEnumFilters
PDXObjectGetData

Attributes

Get	Set
PDXObjectGetData	—
PDXObjectGetDataLength	—
PDXObjectGetSubtype	—

Cos Conversion

PDXObjectGetCosObj

Validity testing

None

Declarations

None

PDFEdit

Provides easy access to PDF page contents. With PDFEdit, you can treat a page's contents as a list of objects—rather than having to manipulate the content stream's PDF marking operators.

The PDFEdit API is meant to be used in conjunction with the Acrobat PDModel and Cos APIs for manipulating PDF documents.

PDEBeginContainer

The PDFEdit representation of the opening bracket of a marked-content sequence. Elements of this type must be paired with elements of type **PDEEndContainer**.

Subclass of

PDEElement

Obtaining

PDEBeginContainerCreate

Disposing

PDERelease

Attributes

Get	Set
PDEBeginContainerGetDict	**PDEBeginContainerSetDict**
PDEBeginContainerGetMCTag	**PDEBeginContainerSetMCTag**

Cos conversion

None

Validity testing

None

Declarations

None

PDEBeginGroup

A group of **PDEElements** on a page in a PDF file.

Subclass of

PDEElement

Obtaining

PDEBeginGroupCreate

Disposing

PDERelease

Attributes

None

Cos conversion

None

Validity testing

None

Declarations

None

PDEClip

A list of **PDEElements** containing a list of **PDEPaths** and **PDETexts** that describe a clip state. **PDEClips** can be created and built up with **PDEClip** methods. Any **PDEElement** object can have **PDEClip** associated with it.

PDEClip objects can contain **PDEContainers** and **PDEGroups** to an arbitrary level of nesting. This allows **PDEContainers** to be used to mark clip objects.

PDEGroups inside **PDEClips** that contain at least one **PDEText** and no **PDEPaths** have a special meaning. All **PDEText** objects contained in such a **PDEGroup** are considered to be part of the same **BT**/**ET** block. This means that the union of these **PDETexts** makes up a single clipping path—as opposed to the *intersection* of the **PDETexts**.

Obtaining

PDEClipCreate
PDEElementGetClip

Disposing

PDERelease

Enumerating

PDEClipFlattenedEnumElems

Attributes

Get	Set
PDEClipGetElem	—
PDEClipGetNumElems	—
—	PDEClipAddElem
—	PDEClipRemoveElems

Cos conversion

None

Validity testing

None

Declarations

None

PDEColorSpace

A reference to a color space used on a page in a PDF file. The color space is part of the graphics state attributes of a **PDEElement**.

Obtaining

PDEColorSpaceCreate
PDEColorSpaceCreateFromName
PDEImageGetColorSpace

Disposing

PDERelease

Attributes

Get	Set
PDEColorSpaceGetBase	—
PDEColorSpaceGetBaseNumComps	—
PDEColorSpaceGetCTable	—
PDEColorSpaceGetHiVal	—
PDEColorSpaceGetName	—
PDEColorSpaceGetNumComps	—

Cos conversion

PDEColorSpaceCreate
PDEColorSpaceGetCosObj

Validity testing

None

Declarations

PDEColorSpec
PDEColorValue

PDEContainer

A group of **PDEElements** on a page in a PDF file. In the PDF file, containers are delimited by Marked Content **BMC**/**EMC** or **BDC**/**EMC** pairs. Every **PDEContainer** has a Marked Content tag associated with it. In addition to grouping a set of elements, a **BDC**/**EMC** pair specifies a property list to be associated with the grouping. Thus a **PDEContainer** corresponding to a **BDC**/**EMC** pair also has a property list dictionary associated with it.

Subclass of

PDEElement

Obtaining

PDEContainerCreate

Disposing

PDERelease

Attributes

Get	Set
PDEContainerGetContent	PDEContainerSetContent
PDEContainerGetDict	PDEContainerSetDict
PDEContainerGetMCTag	PDEContainerSetMCTag

Cos conversion

None

Validity testing

None

Declarations

None

PDEContent

Contains the modifiable contents of a **PDPage**. A PDEContent may be obtained from an existing page or from a Form **XObject** or from a Type 3 CharProc. You can create an empty **PDEContent**. A **PDEContent** contains **PDEElements**. In addition, a **PDEContent** may have attributes such as Form matrix and **setcachedevice** parameters.

Obtaining

PDEContentCreate
PDEContainerGetContent
PDEContentCreateFromCosObj
PDEFormGetContent
PDPageAcquirePDEContent

Disposing

PDERelease

Attributes

Get	Set
PDEContentGetAttrs	—
PDEContentGetElem	—
PDEContentGetNumElems	—
PDEContentGetResources	—
	PDEContentAddElem
—	**PDEContentRemoveElem**

Cos conversion

PDEContentCreateFromCosObj
PDEContentToCosObj

Validity testing

None

Declarations

PDEContentAttrs
PDEContentFlags
PDEContentToCosObjFlags

PDEDeviceNColors

A color space with a variable number of device-dependent components. Usually used to store multiple spot colors in a single color space.

Obtaining

PDEDeviceNColorsCreate

Disposing

None

Attributes

Get	Set
PDEDeviceNColorsGetColorValue	—

Cos conversion

None

Validity testing

None

Declarations

None

PDEElement

The base class for elements of a page display list (**PDEContent**) and for clip objects. The general **PDEElement** methods allow you to get and set general element properties.

Subclasses

PDEContainer
PDEForm
PDEGroup
PDEImage
PDEPath
PDEPlace
PDEPS
PDEShading
PDEText
PDEUnknown
PDEXObject

Obtaining

PDEClipGetElem
PDEContentGetElem
PDEElementCopy

Disposing

PDERelease

Attributes

Get	Set
PDEElementGetBBox	—
PDEElementGetClip	**PDEElementIsAtRect**
PDEElementGetGState	**PDEElementSetGState**
PDEElementGetMatrix	**PDEElementSetMatrix**
PDEElementIsAtPoint	—
PDEElementIsAtRect	—

Cos conversion

None

Validity testing

None

Declarations

PDEElementCopyFlags
PDEEnumElementsFlags
PDEGraphicState
PDEGraphicStateWasSetFlags

PDEEndContainer

The PDFEdit representation of the closing bracket of a marked-content sequence. Elements of this type must be paired with elements of type **PDEBeginContainer**.

Subclass of

PDEElement

Obtaining

PDEEndContainerCreate

Disposing

PDERelease

Attributes

None

Cos conversion

None

Validity testing

None

Declarations

None

PDEEndGroup

A group of **PDEElements** on a page in a PDF file.

Subclass of

PDEElement

Obtaining

PDEEndGroupCreate

Disposing

PDERelease

Attributes

None

Cos conversion

None

Validity testing

None

Declarations

None

PDEExtGState

A reference to an **ExtGState** resource used on a page in a PDF file. It specifies a **PDEElement**'s extended graphics state, which is part of its graphics state.

Obtaining

PDEExtGStateCreate

Disposing

PDERelease

Attributes

Get	Set
PDEExtGStateGetAIS	**PDEExtGStateSetAIS**
PDEExtGStateGetBlendMode	**PDEExtGStateSetBlendMode**
PDEExtGStateGetOpacityFill	**PDEExtGStateSetOpacityFill**
PDEExtGStateGetOpacityStroke	**PDEExtGStateSetOpacityStroke**
PDEExtGStateGetOPFill	**PDEExtGStateSetOPFill**
PDEExtGStateGetOPM	**PDEExtGStateSetOPM**
PDEExtGStateGetOPStroke	**PDEExtGStateSetOPStroke**
PDEExtGStateGetSA	**PDEExtGStateSetSA**
—	**PDEExtGStateSetSoftMask**
PDEExtGStateGetTK	**PDEExtGStateSetTK**

Attributes

None

Cos conversion

PDEExtGStateGetCosObj

Validity testing

None

Declarations

None

PDEFont

A reference to a font used on a page in a PDF file. It may be equated with a font in the system. A **PDEFont** is not the same as a **PDFont**; a **PDFont** is associated with a particular document.

Obtaining

PDEFontCreate
PDEFontCreateFromCosObj
PDEFontCreateFromSysFont
PDEFontCreateFromSysFontEx
PDEFontCreateWithParams
PDETextGetFont

Disposing

PDERelease

Attributes

Get	Set
PDEFontCreateWithParams	—
PDEFontGetCreateNeedFlags	—
PDEFontGetNumCodeBytes	—
PDEFontGetOneByteEncoding	—
PDEFontGetWidths	—
PDEFontGetWidthsNow	—
PDEFontIsMultiByte	—
PDEFontSumWidths	—

Cos conversion

PDEFontCreateFromCosObj

PDEFontGetCosObj

Validity testing:

None

Declarations

PDEFontAttrs
PDEFontCreateFlags
PDEFontInfoRec

PDEForm

A **PDEElement** that corresponds to an instance of an **XObject** Form on a page (or other containing stream such as another **XObject** Form or annotation form). The context associated with this instance includes the actual **CosObj** stream that represents the **XObject** Form and the initial conditions of the graphics state. The latter consists of the transformation matrix, initial color values, and so forth. It is possible to have two **PDEForms** that refer to the same **XObject** Form. The forms will exist at different places on the same page, depending on the transformation matrix. They may also have different colors or line stroking parameters. In the case of a transparency group, the opacity is specified in the **gstate**.

Within a **PDEForm**, each **PDEElement** has it's own **gstate** (or is a container, place, or group object). These **gstates** are independent of the parent **PDEForm** gstate. **PDEForm** elements within the **PDEForm** may have their own opacity.

A **PDEContent** may be obtained from a **PDEForm** to edit the form's display list.

Subclass of

PDEElement

Obtaining

PDEFormCreateFromCosObj

Disposing

PDERelease

Attributes

Get	Set
PDEFormGetContent	
—	PDEFormSetXGroup

Cos conversion

PDEFormCreateFromCosObj
PDEFormGetCosObj

Validity testing

None

Declarations

None

PDEGroup

An in-memory representation of objects in a **PDEContent**. It has no state and is not represented in any way in a PDF content stream (that is, **PDEContent**).

When used in a **PDEClip**, this object is used to associate **PDEText** objects into a single clipping object.

Obtaining

PDEGroupCreate

Disposing

None

Attributes

Get	Set
PDEGroupGetContent	**PDEGroupSetContent**

Cos conversion

None

Validity testing

None

Declarations

None

PDEImage

A **PDEElement** that contains an Image **XObject** or in-line image. You can associate data or a stream with an image.

Subclass of

PDEElement

Obtaining

PDEImageCreate
PDEImageCreateFromCosObj

Disposing

PDERelease

Attributes

Get	Set
PDEImageDataIsEncoded	—
PDEImageGetAttrs	—
PDEImageGetColorSpace	PDEImageSetColorSpace
PDEImageGetData	PDEImageSetData
PDEImageGetDataLen	—
PDEImageGetDataStm	PDEImageSetDataStm
PDEImageGetFilterArray	—
PDEImageGetMatteArray	PDEImageSetMatteArray
PDEImageGetSMask	PDEImageSetSMask
PDEImageIsCosObj	—

Cos conversion

PDEImageCreateFromCosObj
PDEImageGetCosObj

Validity testing

None

Declarations

PDEImageAttrFlags
PDEImageAttrs
PDEImageDataFlags

PDEObject

The abstract super class of **PDFEdit** classes. You can find the type of any object with the **PDEObjectGetType** method. You can then cast and apply that class's methods to the object. In addition, you can cast any of the **PDFEdit** objects to a **PDEObject** and use it anywhere a **PDEObject** is called for, such as in the **PDEObject** methods.

Obtaining

Various since all **PDFEdit** objects are **PDEObjects**.

Disposing

PDERelease

Enumerating

PDEObjectDump

Attributes

Get	Set
PDEGetTag	**PDEAddTag** **PDERemoveTag**
PDEObjectGetType	—
—	**PDEAcquire**
—	**PDERelease**

Cos conversion

None

Validity testing

None

Declarations

PDEType

PDEPath

A **PDEElement** that contains a path. Path objects can be stroked, filled, and/or serve as a clipping path.

Subclass of

PDEElement

Obtaining

PDEPathCreate

Disposing

PDERelease

Attributes

Get	Set
PDEPathGetData	PDEPathSetData
PDEPathGetPaintOp	PDEPathSetPaintOp
—	PDEPathAddSegment

Cos conversion

None

Validity testing

None

Declarations

PDEPathElementType
PDEPathOpFlags

PDEPattern

A reference to a Pattern resource used on a page in a PDF file.

Obtaining

PDEPatternCreate

Disposing

PDERelease

Attributes

None

Cos conversion

PDEPatternGetCosObj

Validity testing

None

Declarations

None

PDEPlace

A **PDEElement** that marks a place on a page in a PDF file. In a PDF file, a place is represented by the **MP** or **DP** Marked Content operators.

Marked content is useful for adding structure information to a PDF file. For instance, a drawing program may want to mark a point with information, such as the start of a path of a certain type. Marked content provides a way to retain this information in the PDF file. A **DP** operator functions the same as the **MP** operator and, in addition, allows a property list dictionary to be associated with a place.

Subclass of

PDEElement

Obtaining

PDEPlaceCreate

Disposing

PDERelease

Attributes

Get	Set
PDEPlaceGetDict	PDEPlaceSetDict
PDEPlaceGetMCTag	PDEPlaceSetMCTag

Cos conversion

None

Validity testing

None

Declarations

None

PDEPS

Element representing in-line or XObject pass-through PostScript object. XObject PostScripts are listed in page XObject resources.

Subclass of

PDEElement

Obtaining

PDEPSCreate
PDEPSCreateFromCosObj

Attributes

Get	Set
PDEPSGetAttrs	—
PDEPSGetData	**PDEPSSetData**
PDEPSGetDataStm	**PDEPSSetDataStm**

Cos conversion

PDEPSCreateFromCosObj

Validity testing

None

Declarations

None

PDEShading

A **PDEElement** that represents smooth shading.

Obtaining

PDEShadingCreateFromCosObj

Disposing

None

Attributes

None

Cos conversion

PDEShadingCreateFromCosObj
PDEShadingGetCosObj

Validity testing

None

PDESoftMask

Object for creating and manipulating a soft mask in a PDF file.

Subclass of

PDEElement

Obtaining

PDESoftMaskCreate
PDESoftMaskCreateFromCosObj
PDESoftMaskCreateFromName

Disposing

PDERelease

Attributes

Get	Set
PDESoftMaskAcquireForm	—
PDESoftMaskGetBackdropColor	PDESoftMaskSetBackdropColor
PDESoftMaskGetCosObj	—
PDESoftMaskGetName	—
PDESoftMaskGetTransferFunction	PDESoftMaskSetTransferFunction
—	PDESoftMaskSetXGroup

Cos conversion

PDESoftMaskGetCosObj
PDESoftMaskCreateFromCosObj

Validity testing

None

Declarations

None

PDEText

A **PDEElement** representing text. It is a container for text as show strings or as individual characters. Each sub-element may have different graphics state properties. However, the same clip applies to all sub-elements of a **PDEText**. Also, the **charpath** of a **PDEText** can be used to represent a clip.

Subclass of

PDEElement

Obtaining

PDETextCreate

Disposing

PDERelease

Attributes

Get	Set
PDETextGetAdvanceWidth	—
PDETextGetBBox	—
PDETextGetFont	PDETextRunSetFont
PDETextGetGState	PDETextRunSetGState
PDETextGetMatrix	—
PDETextGetNumBytes	—
PDETextGetNumRuns	—
PDETextGetQuad	—
PDETextGetRunForChar	—
PDETextGetStrokeMatrix	PDETextRunSetStrokeMatrix
PDETextGetState	PDETextRunSetState
PDETextGetText	—
PDETextGetTextMatrix	PDETextRunSetTextMatrix
PDETextGetTextState	PDETextRunSetTextState
PDETextRunGetCharOffset	—
PDETextRunGetNumChars	—

Get	Set
—	**PDETextRunSetMatrix**
—	**PDETextRunSetState**
—	**PDETextRunSetMatrix**
—	**PDETextRunSetStrokeMatrix**
PDETextIsAtPoint	—
—	**PDETextAdd**
—	**PDETextIsAtPoint**
—	**PDETextReplaceChars**
—	**PDETextSplitRunAt**

Cos conversion

None

Validity testing

None

Declarations

PDEGraphicState
PDEGraphicStateWasSetFlags
PDETextFlags
PDETextRenderMode
PDETextState
PDETextStateWasSetFlags

PDEUnknown

A **PDEElement** representing an unknown element.

Subclass of

PDEElement

Obtaining

None

Disposing

None

Attributes

Get	Set
PDEUnknownGetOpName	—

Cos conversion

None

Validity testing

None

Declarations

None

PDEXGroup

A transparency (**XGroup**) resource.

Subclass of

PDEElement

Obtaining

PDEXGroupCreate
PDEXGroupCreateFromCosObj

Disposing

PDERelease

Attributes

Get	Set
PDEXGroupAcquireColorSpace	—
PDEXGroupGetCosObj	—
PDEXGroupGetIsolated	PDEXGroupSetIsolated
PDEXGroupGetKnockout	PDEXGroupSetKnockout
—	PDEXGroupSetColorSpace

Cos conversion

PDEXGroupGetCosObj
PDEXGroupCreateFromCosObj

Validity testing

None

Declarations

None

PDEXObject

A **PDEElement** representing an arbitrary **XObject**.

Subclass of

PDEElement

Obtaining

PDEXObjectCreate

Disposing

PDERelease

Attributes

None

Cos conversion

PDEXObjectGetCosObj

Validity testing

None

Declarations

None

PDSysEncoding

A **PDEElement** that provides system encoding for a PDF file.

Subclass of

PDEElement

Obtaining

PDSysEncodingCreateFromBaseName
PDSysEncodingCreateFromCMapName

Disposing

PDERelease

Attributes

Get	Set
PDSysEncodingGetWMode	—

Cos conversion

None

Validity testing

None

Declarations

None

PDSysFont

A reference to a font installed in the host system. **PDSysFont** methods allow you to list the fonts available in the host system and to find a font in the system that matches a **PDEFont**, if it is present.

Obtaining

PDEnumSysFonts
PDFindSysFont
PDFindSysFontEx
PDFindSysFontForPDEFont

Disposing

None

Enumerating

PDEnumSysFonts

Attributes

Get	Set
PDSysFontAcquirePlatformData	**PDSysFontReleasePlatformData**
PDSysFontGetAttrs	—
PDSysFontGetCIDSystemInfo	—
PDSysFontGetCreateFlags	—
PDSysFontGetInfo	—
PDSysFontGetName	—
PDSysFontGetType0Widths, **PDSysFontGetWidths**, **PDSysFontGetWidthsEx**	—
—	**PDEmbedSysFontForPDEFont**

Cos conversion

None

Validity testing

None

Declarations

PDSysFontMatchFlags

PDSEdit

The creation and manipulation of logical structure in PDF documents.

PDSAttrObj

Represents PDF logical structure attribute objects, which are dictionaries containing application-specific data that can be attached to **PDSElements**.

Obtaining

PDSAttrObjCreate
PDSAttrObjCreateFromStream
PDSClassMapGetAttrObj
PDSElementGetAttrObj

Disposing

PDSElementRemoveAttrObj

Attributes

Get	Set
PDSAttrObjGetOwner	—
PDSClassMapGetAttrObj	**PDSClassMapAddAttrObj** **PDSElementRemoveAttrObj**
PDSElementGetAttrObj	**PDSElementRemoveAttrObj** **PDSElementRemoveAllAttrObjs**

Cos conversion

None

Validity testing

None

Declarations

None

PDSClassMap

Associates class identifiers, which are names, with objects of type **PDSAttrObj**. Structural elements maintain a list of names identifying classes to which they belong. The associated attributes are thus shared by all structural elements belonging to a given class. There is one class map per document, associated with the **PDSTreeRoot**.

Obtaining

PDSTreeRootCreateClassMap
PDSTreeRootGetClassMap

Disposing

None

Attributes

Get	Set
—	**PDSClassMapAddAttrObj** **PDSClassMapRemoveAttrObj**
PDSClassMapGetAttrObj	—
PDSClassMapGetNumAttrObjs	—
PDSTreeRootGetClassMap	**PDSTreeRootRemoveClassMap**

Cos conversion

None

Validity testing

None

Declarations

None

PDSElement

Represents PDF structural elements, which are nodes in a tree giving a PDF document's logical structure.

Obtaining

PDSElementCreate
PDSElementGetParent
PDSMCGetParent
PDSOBJGetParent
PDSTreeRootGetElementFromID

Disposing

None

Attributes

Get	Set
—	**PDSElementAddAttrObj** **PDSElementRemoveAttrObj** **PDSElementRemoveAllAttrObjs**
—	**PDSElementAddClass** **PDSElementRemoveClass** **PDSElementRemoveAllClasses**
PDSElementGetActualText	**PDSElementSetActualText**
PDSElementGetAlt	**PDSElementSetAlt**
PDSElementGetAttrObj	—
PDSElementGetClass	—
PDSElementGetFirstPage	—
PDSElementGetID	**PDSElementClearID**, **PDSElementSetID**

Get	Set
PDSElementGetKid	PDSElementInsertKid PDSElementInsertOBJAsKid PDSElementReplaceKid PDSElementRemoveKid PDSElementRemoveKidOBJ PDSElementInsertMCAsKid PDSElementRemoveKidMC PDSElementReplaceKidMC
PDSElementGetKidEx	—
PDSElementGetLanguage	PDSElementSetLanguage
PDSElementGetNumAttrObjs	—
PDSElementGetNumClasses	—
PDSElementGetNumKids	—
PDSElementGetParent	—
PDSElementGetRevision	PDSElementIncrementRevision
PDSElementGetTitle	PDSElementSetTitle
PDSElementGetType	PDSElementSetType

Cos conversion

None

Validity testing

None

Declarations

None

PDSMC

Represents marked content—portions of the graphic content of a PDF document that may be included in the document's logical structure hierarchy. This type is identical with the PDFEdit layer type **PDEContainer**.

Obtaining

None

Attributes

Get	Set
PDSMCGetParent	—
—	PDSElementInsertMCAsKid PDSElementRemoveKidMC PDSElementReplaceKidMC

Cos conversion

None

Validity testing

None

Declarations

None

PDSRoleMap

Represents mappings of structural element types present in a PDF document to standard element types having similar uses. There is one **PDSClassMap** per document, associated with the **PDSTreeRoot**.

Obtaining

PDSRoleMapCopy
PDSTreeRootCreateRoleMap
PDSTreeRootGetRoleMap

Disposing

PDSTreeRootRemoveRoleMap

Attributes

Get	Set
PDSRoleMapCopy	—
PDSRoleMapGetDirectMap	—
PDSRoleMapDoesMap	**PDSRoleMapMap** **PDSRoleMapUnMapDst** **PDSRoleMapUnMapSrc**
PDSTreeRootGetRoleMap	**PDSTreeRootRemoveRoleMap**

Cos conversion

None

Validity testing

None

Declarations

None

PDSTreeRoot

The root of the structure tree, which is a central repository for information related to a PDF document's logical structure. There is at most one **PDSTreeRoot** in each document.

Obtaining

PDDocCreateStructTreeRoot
PDDocGetStructTreeRoot

Disposing

PDDocRemoveStructTreeRoot

Attributes

Get	Set
PDDocGetStructTreeRoot	—
PDSTreeRootGetClassMap	**PDSTreeRootRemoveClassMap**
PDSTreeRootGetElementFromID	—
PDSTreeRootGetKid	**PDSTreeRootInsertKid** **PDSTreeRootRemoveKid**
PDSTreeRootGetNumKids	—
PDSTreeRootGetRoleMap	**PDSTreeRootRemoveRoleMap**
—	**PDSTreeRootReplaceKid**

Cos conversion

None

Validity testing

None

Declarations

None

Methods

AS Layer Methods

AS Layer Methods

General

ASGetSecs

```
ASUns32 ASGetSecs (void);
```

Description

Returns the number of seconds elapsed since midnight, January 1, 1970, coordinated universal time.

Parameters

None

Return Value

See above.

Exceptions

None

Notifications

None

Header File

ASCalls.h

Related Methods

None

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASHostMBLen

```
ASInt32 ASHostMBLen (ASHostEncoding encoding, ASUns8 byte);
```

Description

Tells you whether the given **byte** is a lead byte of a multi-byte character and how many tail bytes follow.

When parsing a string in a host encoding you must keep in mind that the string could be in a variable length multi-byte encoding. In such an encoding (e.g., **Shift-JIS**) the number of bytes required to represent a character varies on a character-by-character basis. To parse such a string you must start at the beginning and, for each byte, ask whether that byte represents a character or is the first byte of a multi-byte character. If the byte is a "lead byte" for a multi-byte character you must also compute how many bytes will follow the lead byte to make up the entire character. Currently the API provides a call (**PDHostMBLen**) that performs these computations but only if the encoding in question is the OS encoding (as returned by **PDGetHostEncoding**). **ASHostMBLen** allows you to ask this question for any byte in any host encoding.

See below for an example of how to parse a multi-byte string.

Parameters

encoding	Host encoding type.
byte	The first byte of a multi-byte character.

Return Value

The number of additional bytes required to form the character. For example, if the encoding is a double-byte encoding the return value will be **1** for a two-byte character and **0** for a one-byte character. For Roman encodings the return value will always be **0**.

NOTE: **ASHostMBLen** cannot confirm that required number of trailing bytes actually follow the first byte. If you are parsing a multi-byte string make sure your code will stop at the first null (zero) byte even if it appears immediately after the lead byte of a multi-byte character.

Exceptions

None

Notifications

None

Header File

ASCalls.h

Related Methods

PDGetHostEncoding
PDHostMBLen

Example

```
ASUns8 *theString = <pointer to multi-byte string>
ASHostEncoding encoding = <encoding for the string>
while (*thisString) // All multi-byte encodings are null terminated
{
     ASUns8 thisByte = *theString++;
     ASUns32 thisChar = thisByte;
     ASInt32 trailingBytes = ASHostMBLen(encoding, thisByte);
     while (trailingBytes--)
            {
             thisByte = *thisChar++;
             if (thisByte == 0)
             ASRaise(this is a naughty string);
             else thisChar = (thisChar << 8) | thisByte;
             } // At this point you have the entire character in
               // thisChar. Do with it what you will.
}
```

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASScriptFromHostEncoding

```
ASScript ASScriptFromHostEncoding (ASHostEncoding osScript);
```

Description

Converts from a host encoding type to an **ASScript** value. On Windows, the host encoding is a CHARSET id. On Mac OS, the host encoding is a script code.

Parameters

osScript	The host encoding type.

Return Value

See above.

Exceptions

None

Notifications

None

Header File

ASExtraCalls.h

Related Methods

ASScriptToHostEncoding

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASScriptToHostEncoding

```
ASHostEncoding ASScriptToHostEncoding (ASScript asScript);
```

Description

Converts from an **ASScript** code to a host encoding type. On Windows, the host encoding is a CHARSET id. On Mac OS, the host encoding is a script code.

Parameters

asScript	The script value.

Return Value

See above.

Exceptions

None

Notifications

None

Header File

ASExtraCalls.h

Related Methods

ASScriptFromHostEncoding

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASAtom

ASAtomExistsForString

```
ASBool ASAtomExistsForString (const char* str, ASAtom* atom);
```

Description

Tests whether or not an **ASAtom** exists for the specified string.

Parameters

sStr	The string to test.
atom	*(Filled by the method, may be **NULL**)* If the **ASAtom** corresponding to **nameStr** already exists, it is returned in **atom**. Pass **NULL** to simply check whether or not the **ASAtom** already exists.

Return Value

true if an **ASAtom** already exists for **str**, **false** otherwise.

Exceptions

None

Notifications

None

Header File

CorCalls.h

Related Methods

ASAtomFromString
ASAtomGetCount (Only available with PDF Library SDK)
ASAtomGetString

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

ASAtomFromString

```
ASAtom ASAtomFromString (const char* str);
```

Description

Gets the **ASAtom** for the specified string.You can also use this method to create an **ASAtom**, since it creates one for the string if one does not already exist.

If an **ASAtom** already exists for **str**, the existing **ASAtom** is returned. Thus **ASAtom**s may be compared for equality of the underlying string.

Because **ASAtoms** cannot be deleted, they are useful for strings that are used many times in an Acrobat viewer session, but are not advisable for strings that have a short lifetime. For the same reason, it is not a good idea to create large numbers of **ASAtom**s.

Parameters

str	The string for which an **ASAtom** is created.

Return Value

The **ASAtom** corresponding to **str**.

Exceptions

None

Notifications

None

Header File

CorCalls.h

Related Methods

ASAtomExistsForString
ASAtomGetCount (Only available with PDF Library SDK)
ASAtomGetString

Example

```
/* Compare ASAtoms for equality */
PDAnnot annot;

if (PDAnnotGetSubtype(annot) == ASAtomFromString("Link")) {
     ...
}
```

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

ASAtomGetString

```
const char* ASAtomGetString (ASAtom atom);
```

Description

Gets the string associated with the specified **ASAtom**.

Parameters

atom	The **ASAtom** whose string is obtained.

Return Value

The string corresponding to **atom**. Returns an empty string if **atom == ASAtomNull** or **NULL** if the **atom** has not been defined.

Exceptions

None

Notifications

None

Header File

CorCalls.h

Related Methods

ASAtomExistsForString
ASAtomFromString

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

ASCab

ASCabCopy

```
void ASCabCopy (ASCab srcCab, ASCab dstCab);
```

Description

For each key/value pair in **srcCab** a copy of the key/value pair will be placed into **dstCab**, possibly overwriting any identically named key/value pair in **dstCab**. If the value being copied is a pointer with an associated “destroyProc”, the pointer and its type string, but not the data it points to, will be copied and an internal reference count incremented.

Parameters

srcCab	The source cabinet.
dstCab	The destination cabinet.

Return Value

None

Exceptions

genErrBadParm
genErrNoMemory

Notifications

None

Header File

ASExtraCalls.h

Related Methods

ASCabDup

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASCabDestroy

```
void ASCabDestroy (ASCab theCab);
```

Description

Destroys the cabinet and all its key/value pairs. This method raises if the cabinet is the value for some key in another cabinet.

Parameters

theCab	The cabinet.

Return Value

None

Exceptions

genErrBadParm

Notifications

None

Header File

ASExtraCalls.h

Related Methods

None

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASCabDestroyEmpties

```
void ASCabDestroyEmpties (ASCab theCab, ASBool recurse);
```

Description

Finds any empty cabinets in **theCab**, removes their corresponding keys, and destroys them.

Parameters

theCab	The cabinet.
recurse	**true** to recurse through all sub-cabinets inside **theCab**; **false** to limit enumeration to key/value pairs directly inside **theCab**.

Return Value

None

Exceptions

genErrBadParm

Notifications

None

Header File

ASExtraCalls.h

Related Methods

None

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASCabDetachBinary

```
void* ASCabDetachBinary (ASCab theCab, const char* theKey,
ASInt32* numBytes);
```

Description

Retrieves the binary object stored under **theKey** in **theCab** and removes the key from **theCab**.

The client assumes ownership of the object and is responsible for de-allocating any resources associated with it.

Parameters

theCab	The cabinet.
theKey	The key name.
numBytes	*(Filled by the method, may be **NULL**)* If non-**NULL**, contains the size of the object retrieved, in bytes.

Return Value

A pointer to the binary object. Will be NULL if **theKey** is not present in **theCab** or if the value stored under **theKey** is not of type **kASTypeBinary**.

Exceptions

genErrBadParm

Notifications

None

Header File

ASExtraCalls.h

Related Methods

ASCabGetBinary
ASCabGetBinaryCopy
ASCabPutBinary

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASCabDetachCab

```
ASCab ASCabDetachCab (ASCab theCab, const char* theKey);
```

Description

Retrieves the **ASCab** stored under **theKey** in **theCab** and removes the key from **theCab**.

The client assumes ownership of the **ASCab** returned and is responsible for destroying it.

Parameters

theCab	The cabinet.
theKey	The key name.

Return Value

The cabinet. Will be **NULL** if **theKey** is not present in **theCab**, or if the value stored under **theKey** is not of type **kASValueCabinet**.

Exceptions

genErrBadParm

Notifications

None

Header File

ASExtraCalls.h

Related Methods

ASCabPutCab
ASCabGetCab

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASCabDetachPathName

```
void ASCabDetachPathName (ASCab theCab, const char* theKey,
ASFileSys* fileSys, ASPathName* pathName);
```

Description

Retrieves the **ASPathName** stored under **theKey** in **theCab** and removes the key from **theCab**.

Both **fileSys** and **pathName** will be **NULL** if **theKey** was not found, or there was no valid **ASPathName** stored under the key, or if the **ASPathName** does not point to an existing file.

It is the client's responsibility to release the memory associated with the **ASPathName** using **ASFileSysReleasePath**.

Parameters

theCab	The cabinet.
theKey	The key name.
fileSys	*(Filled by the method)* The **ASFileSys** that **pathName** was opened through.
pathName	*(Filled by the method)* The pathname.

Return Value

None

Exceptions

genErrNoMemory
Any exceptions raised by **ASFileSysPathFromDIPath**.

Notifications

None

Header File

ASExtraCalls.h

Related Methods

ASCabPutPathName
ASCabGetPathNameCopy

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASCabDetachPointer

```
void* ASCabDetachPointer (ASCab theCab, const char* theKey,
const char* expectedType, ASBool* noRefs);
```

Description

Retrieves the pointer stored under **theKey** in **theCab** and removes the key from **theCab**.

If **noRefs** is set to **true**, the client assumes ownership of the data referenced by the pointer and is responsible for de-allocating any resources associated with it.

Parameters

theCab	The cabinet.
theKey	The key name.
expectedType	The data type referenced by the pointer. Since **ASCabDetachPointer** is actually a macro, you should pass the type as literal name, not a string—e.g., **PDDoc**, not **"PDDoc"**. Pointers are always “typed” in that they always have associated with them a string indicating the type to which they point.
noRefs	*(Filled by the method, may be **NULL**)* If non-**NULL**, a value of **true** indicates that there are no other **ASCab**s that reference this pointer, and a value of **false** indicates that some **ASCab** still contains a copy of the pointer.

Return Value

The pointer value stored under **theKey**. Will be **NULL** if **theKey** is not present in **theCab** or the value stored under **theKey** is not of type **kASValuePointer** or the type of the pointer does not match **expectedType**.

Exceptions

genErrBadParm

Notifications

None

Header File

ASExtraCalls.h

Related Methods

ASCabGetPointer
ASCabPutPointer

Availability

Available if **`PI_ASEXTRA_VERSION`** (in `PIRequir.h`) is set to **`0x00050000`** or higher.

ASCabDetachString

```
char* ASCabDetachString (ASCab theCab, const char* theKey);
```

Description

Retrieves the string stored under **theKey** in **theCab** and removes the key from **theCab**.

The client assumes ownership of the string and is responsible for de-allocating any resources associated with it.

Parameters

theCab	The cabinet.
theKey	The key name.

Return Value

The string stored under **theKey**. Will be **NULL** if **theKey** is not present in **theCab**, or if the value stored under **theKey** is not of type **kASValueString**.

Exceptions

genErrBadParm

Notifications

None

Header File

ASExtraCalls.h

Related Methods

ASCabGetString
ASCabGetStringCopy
ASCabPutString

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASCabDetachText

```
ASText ASCabDetachText (ASCab theCab, const char* theKey);
```

Description

Retrieves the **ASText** object stored under **theKey** in **theCab** and removes the key from **theCab**.

The client assumes ownership of the **ASText** object and is responsible for de-allocating it using **ASTextDestroy**.

Parameters

theCab	The cabinet.
theKey	The key name.

Return Value

The **ASText** object stored under **theKey**. Will be **NULL** if **theKey** is not present in **theCab**, or if the value stored under **theKey** is not of type **kASValueText**.

Exceptions

genErrBadParm

Notifications

None

Header File

ASExtraCalls.h

Related Methods

ASCabGetText
ASCabPutText

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASCabDup

```
ASCab ASCabDup (ASCab srcCab);
```

Description

Creates a new ASCab and populates it with copies of the key/value pairs in **srcCab**. Equivalent to **ASCabCopy** (**srcCab**, **ASCabNew** ()).

Parameters

srcCab	The source cabinet.

Return Value

The newly created **ASCab**.

Exceptions

genErrBadParm
genErrNoMemory

Notifications

None

Header File

ASExtraCalls.h

Related Methods

ASCabCopy

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASCabEnum

```
void ASCabEnum (ASCab theCab, ASCabEnumProc enumProc,
void* clientData);
```

Description

Enumerates all the keys in the cabinet.

Keys consisting solely of digits are enumerated first, in numeric order (assuming they're not padded with zeros at the front, which will confuse matters.). Non-numeric keys are then enumerated in **strcmp** order.

It is safe to add, delete, and modify items in **theCab** during the enumeration. Items that are added during the enumeration will not be enumerated. Modified items that have been enumerated already will not be enumerated again. Delete items that have not yet been enumerated will not be enumerated.

Parameters

theCab	The cabinet.
enumProc	User-supplied callback that is called for each entry found in **theCab**.
clientData	Pointer to user-supplied data to pass to **enumProc** each time it is called.

Return Value

None

Exceptions

genErrBadParm

Will **RERAISE** any exceptions thrown by **enumProc**.

Notifications

None

Header File

ASExtraCalls.h

Related Methods

None

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASCabEqual

```
ASBool ASCabEqual (ASCab cab1, ASCab cab2);
```

Description

Compares two cabinets and verifies that they have a matching set of keys and all key values are equal (as reported by **ASCabValueEqual**).

Parameters

cab1	The first cabinet.
cab2	The second cabinet.

Return Value

true if they are equal, **false** otherwise.

Exceptions

genErrBadParm

Notifications

None

Header File

ASExtraCalls.h

Related Methods

ASCabValueEqual

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASCabFromEntryList

```
ASCab ASCabFromEntryList (const ASCabEntryRec* entryList);
```

Description

Builds a cabinet based on a constant array of **ASCabDescriptor** records (see **ASCabEntryRec**). The first entry in each descriptor specifies the name of the key; subsequent fields contain the value. The entry list must end with a descriptor containing **NULL** for the key name. See ASExtraExpt.h for more info.

Parameters

entryList	A constant array of **ASCabDescriptor** records (see **ASCabEntryRec**). Passing **NULL** generates an empty **ASCab**.

Return Value

The newly created **ASCab**.

Exceptions

genErrBadParm

Notifications

None

Header File

ASExtraCalls.h

Related Methods

None

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASCabGetAtom

```
ASAtom ASCabGetAtom (ASCab theCab, const char* theKey,
ASAtom defValue);
```

Description

Returns the **ASAtom** value stored under **theKey** in **theCab**.

Parameters

theCab	The cabinet.
theKey	The key name.
defValue	The default value.

Return Value

The **ASAtom** value stored under **theKey** if the key is found and the value stored under it is of type **kASValueAtom**; otherwise **defValue** is returned.

Exceptions

genErrBadParm

Notifications

None

Header File

ASExtraCalls.h

Related Methods

ASCabPutAtom

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASCabGetBinary

```
const void* ASCabGetBinary (ASCab theCab, const char* theKey,
ASInt32* numBytes);
```

Description

Returns the binary object stored under **theKey** in **theCab**.

Parameters

theCab	The cabinet.
theKey	The key name.
numBytes	*(Filled by the method, may be **NULL**)* If non-**NULL**, contains the size of the object returned, in bytes.

Return Value

The binary object stored under **theKey** if the key is found and the value stored under it is of type **kASValueBinary**; otherwise **NULL** is returned. This object is owned by the **ASCab** and should not be destroyed by the caller.

Exceptions

genErrBadParm

Notifications

None

Header File

ASExtraCalls.h

Related Methods

ASCabGetBinaryCopy
ASCabDetachBinary
ASCabPutBinary

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASCabGetBinaryCopy

```
void* ASCabGetBinaryCopy (ASCab theCab, const char* theKey,
ASInt32* numBytes);
```

Description

Returns a copy of the binary object stored under **theKey** in **theCab**. It is the client's responsibility to release the memory associated with the object using **ASfree**.

Parameters

theCab	The cabinet.
theKey	The key name.
numBytes	*(Filled by the method, may be **NULL**)* If non-**NULL**, contains the size of the object returned.

Return Value

The binary object stored under **theKey** if the key is found and the value stored under it is of type **kASValueBinary**; otherwise **NULL** is returned.

Exceptions

genErrBadParm
genErrNoMemory

Notifications

None

Header File

ASExtraCalls.h

Related Methods

ASCabGetBinary
ASCabDetachBinary
ASCabPutBinary

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASCabGetBool

```
ASBool ASCabGetBool (ASCab theCab, const char* theKey,
ASBool defValue);
```

Description

Returns the **ASBool** value stored under **theKey** in **theCab**.

Parameters

theCab	The cabinet.
theKey	The key name.
defValue	The default value.

Return Value

The **ASBool** value stored under **theKey** if the key is found and the value stored under it is of type **kASValueBool**; otherwise **defValue** is returned.

Exceptions

genErrBadParm

Notifications

None

Header File

ASExtraCalls.h

Related Methods

ASCabPutBool

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASCabGetCab

```
ASCab ASCabGetCab (ASCab theCab, const char* theKey);
```

Description

Returns the **ASCab** stored under **theKey** in **theCab**.

Parameters

theCab	The cabinet.
theKey	The key name.

Return Value

The **ASCab** stored under **theKey** if the key is found and the value stored under it is of type **kASValueCabinet**; otherwise **NULL** is returned. This object is owned by **theCab** and should not be destroyed by the client.

Exceptions

genErrBadParm

Notifications

None

Header File

ASExtraCalls.h

Related Methods

ASCabPutCab
ASCabDetachCab

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASCabGetDouble

```
double ASCabGetDouble (ASCab theCab, const char* theKey,
double defValue);
```

Description

Returns the double value stored under **theKey** in **theCab**. If the value stored under **theKey** is of type **kASValueInteger**, this value will be cast to a double and returned to the client.

Parameters

theCab	The cabinet.
theKey	The key name.
defValue	The default value.

Return Value

The double value stored under **theKey** if the key is found and the value stored under it is of type **kASValueDouble** or **kASValueInteger**; otherwise **defValue** is returned.

Exceptions

genErrBadParm

Notifications

None

Header File

ASExtraCalls.h

Related Methods

ASCabPutDouble

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASCabGetInt

```
ASInt32 ASCabGetInt (ASCab theCab, const char* theKey,
ASInt32 defValue);
```

Description

Returns the **ASInt32** value stored under **theKey** in **theCab**.

Parameters

theCab	The cabinet.
theKey	The key name.
defValue	The default value.

Return Value

The **ASInt32** value stored under **theKey** if the key is found and the value stored under it is of type **kASValueInteger**; otherwise **defValue** is returned.

Exceptions

genErrBadParm

Notifications

None

Header File

ASExtraCalls.h

Related Methods

ASCabPutInt

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASCabGetPathNameCopy

```
void ASCabGetPathNameCopy (ASCab theCab, const char* theKey,
ASFileSys* fileSys, ASPathName* pathName);
```

Description

Returns a copy of **ASPathName** stored under **theKey** in **theCab**. It is the client's responsibility to release the **ASPathName** using **ASFileSysReleasePath**.

Both **fileSys** and **pathName** will be **NULL** if **theKey** was not found, or there was no valid **ASPathName** stored under the key, or if the pathname does not point to an existing file.

Parameters

theCab	The cabinet.
theKey	The key name.
fileSys	*(Filled by the method)* The **ASFileSys** that **pathName** was opened through.
pathName	*(Filled by the method)* The pathname.

Return Value

None

Exceptions

genErrNoMemory
Any exception raised by **ASFileSysPathFromDIPath**.

Notifications

None

Header File

ASExtraCalls.h

Related Methods

ASCabPutPathName
ASCabDetachPathName

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASCabGetPointer

```
void* ASCabGetPointer (ASCab theCab, const char* theKey,
const char* expectedType);
```

Description

Returns the pointer value stored under **theKey** in **theCab**.

Parameters

theCab	The cabinet.
theKey	The key name.
expectedType	The data type referenced by the pointer. Since **ASCabGetPointer** is actually a macro, you should pass the type as literal name, not a string—e.g., **PDDoc**, not **"PDDoc"**. Pointers are always “typed” in that they always have associated with them a string indicating the type to which they point.

Return Value

The pointer value stored under **theKey** if the key is found and the value stored under **theKey** is of type **kASValuePointer** and the type of the pointer matches **expectedType**; otherwise **NULL** is returned. The object referenced by this pointer is owned by **theCab** and should not be destroyed by the client.

Exceptions

genErrBadParm

Notifications

None

Header File

ASExtraCalls.h

Related Methods

ASCabDetachPointer
ASCabPutPointer

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASCabGetPointerDestroyProc

```
ASCabPointerDestroyProc ASCabGetPointerDestroyProc
(ASCab theCab, const char* theKey);
```

Description

Obtains the resource de-allocation callback associated with the pointer stored under **theKey** in **theCab**. When the reference count of the pointer falls to zero, the callback is called to free the resources associated with the object it references.

Parameters

theCab	The cabinet.
theKey	The key name.

Return Value

The callback (if any) associated with the pointer if the key is found and the value stored under it is of type **kASValuePointer**; otherwise **NULL** is returned.

Exceptions

genErrBadParm

Notifications

None

Header File

ASExtraCalls.h

Related Methods

ASCabDetachPointer

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASCabGetPointerType

```
const char* ASCabGetPointerType (ASCab theCab,
const char* theKey);
```

Description

Returns a string representation of the data type referenced by the pointer stored under **theKey** in **theCab**.

Parameters

theCab	The cabinet.
theKey	The key name.

Return Value

The string if the key is found and the value stored under it is of type **kASValuePointer**; otherwise **NULL** is returned.

Exceptions

genErrBadParm

Notifications

None

Header File

ASExtraCalls.h

Related Methods

None

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASCabGetString

```
const char* ASCabGetString (ASCab theCab, const char* theKey);
```

Description

Returns the string stored under **theKey** in **theCab.**

Parameters

theCab	The cabinet.
theKey	The key name.

Return Value

The string stored under **theKey** if the key is found and the value stored under it is of type **kASValueString**; otherwise **NULL** is returned. The object referenced by this pointer is owned by **theCab** and should not be destroyed by the client.

Exceptions

genErrBadParm
genErrNoMemory

Notifications

None

Header File

ASExtraCalls.h

Related Methods

ASCabGetStringCopy
ASCabDetachString
ASCabPutString

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASCabGetStringCopy

```
char* ASCabGetStringCopy (ASCab theCab, const char* theKey);
```

Description

Returns a copy of the string stored under **theKey** in **theCab.**

It is the client's responsibility to release the memory allocated for the string using **ASfree**.

Parameters

theCab	The cabinet.
theKey	The key name.

Return Value

A copy of the string stored under **theKey** if the key is found and the value stored under it is of type **kASValueString**; otherwise **NULL** is returned.

Exceptions

genErrBadParm
genErrNoMemory

Notifications

None

Header File

ASExtraCalls.h

Related Methods

ASCabGetString
ASCabDetachString
ASCabPutString

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASCabGetText

```
ASText ASCabGetText (ASCab theCab, const char* theKey);
```

Description

Returns the **ASText** object stored under **theKey** in **theCab.**

Parameters

theCab	The cabinet.
theKey	The key name.

Return Value

The **ASText** object stored under **theKey** if the key is found and the value stored under it is of type **kASValueText**; otherwise **NULL** is returned. This object is owned by **theCab** and should not be destroyed by the client.

Exceptions

genErrBadParm

Notifications

None

Header File

ASExtraCalls.h

Related Methods

ASCabDetachText
ASCabPutText

Availability

Available if **PI_ASEXTRA_VERSION** (in **PIRequir.h**) is set to **0x00050000** or higher.

ASCabGetType

```
ASCabValueType ASCabGetType (ASCab theCab,
const char* theKey);
```

Description

Returns the type of the value stored under **theKey** in **theCab**.

Parameters

theCab	The cabinet.
theKey	The key name.

Return Value

The type of the value stored under **theKey**, or **kASValueUnknown** if the key is not found.

Exceptions

genErrBadParm

Notifications

None

Header File

ASExtraCalls.h

Related Methods

None

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASCabKnown

```
ASBool ASCabKnown (ASCab theCab, const char* theKey);
```

Description

Returns **true** if **theKey** is present in **theCab**.

Parameters

theCab	The cabinet.
theKey	The key name.

Return Value

See above.

Exceptions

genErrBadParm

Notifications

None

Header File

ASExtraCalls.h

Related Methods

None

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASCabMakeEmpty

```
void ASCabMakeEmpty (ASCab theCab);
```

Description

Removes all keys from **theCab** and destroys all values they point to.

Parameters

theCab	The cabinet.

Return Value

None

Exceptions

genErrBadParm

Notifications

None

Header File

ASExtraCalls.h

Related Methods

None

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASCabMunge

```
void ASCabMunge (ASCab theCab, ASCab keyCab,
ASCabMungeAction action);
```

Description

Munges the keys and the corresponding values in **theCab** based on the keys in **keyCab** and the munge action. Note that **keyCab** is never altered; **theCab** is.

Parameters

theCab	The cabinet to be modified.
keyCab	The cabinet used to modify **theCab**.
action	The type of action to be taken.

Return Value

None

Exceptions

genErrBadParm

Notifications

None

Header File

ASExtraCalls.h

Related Methods

None

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASCabNew

```
ASCab ASCabNew (void);
```

Description

Creates a new, empty cabinet.

Parameters

None

Return Value

The newly created cabinet.

Exceptions

genErrNoMemory

Notifications

None

Header File

ASExtraCalls.h

Related Methods

None

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASCabNumEntries

```
ASInt32 ASCabNumEntries (ASCab theCab);
```

Description

Returns the number of key/value pairs in **theCab**.

Parameters

theCab	The cabinet.

Return Value

See above.

Exceptions

genErrBadParm

Notifications

None

Header File

ASExtraCalls.h

Related Methods

None

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASCabPutAtom

```
void ASCabPutAtom (ASCab theCab, const char* theKey,
ASAtom atomValue);
```

Description

Stores an **ASAtom** value in **theCab** under **theKey.**

Parameters

theCab	The cabinet.
theKey	*(May be **NULL**)* The key name.
atomValue	The value to be stored.

Return Value

None

Exceptions

genErrBadParm

Notifications

None

Header File

ASExtraCalls.h

Related Methods

ASCabGetAtom

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASCabPutBinary

```
void ASCabPutBinary (ASCab theCab, const char* theKey,
void* theBlob, ASInt32 blobSize);
```

Description

Stores a binary object in **theCab** under **theKey**. The **ASCab** assumes ownership of the binary object, so the client should not attempt to free the memory associated with it. The binary object must have been allocated using **ASmalloc**.

Parameters

theCab	The cabinet.
theKey	*(May be **NULL**)* The key name.
theBlob	*(May be **NULL**)* A pointer to the binary object to be stored. If **NULL**, the value (if any) stored under **theKey** in **theCab** is destroyed and **theKey** removed from **theCab**.
blobSize	The size of the binary object.

Return Value

None

Exceptions

genErrBadParm

Notifications

None

Header File

ASExtraCalls.h

Related Methods

ASCabGetBinary
ASCabGetBinaryCopy
ASCabDetachBinary

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASCabPutBool

```
void ASCabPutBool (ASCab theCab, const char* theKey,
ASBool boolValue);
```

Description

Stores an **ASBool** value in **theCab** under **theKey**.

Parameters

theCab	The cabinet.
theKey	*(May be **NULL**)* The key name.
boolValue	The value to be stored.

Return Value

None

Exceptions

genErrBadParm

Notifications

None

Header File

ASExtraCalls.h

Related Methods

ASCabGetBool

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASCabPutCab

```
void ASCabPutCab (ASCab theCab, const char* theKey,
ASCab cabVal);
```

Description

Stores an **ASCab** in **theCab** under **theKey**. If the cabinet is already a value for some other **ASCab**, **ASCabPutCab** will raise, that is, any cabinet can be contained by at most one other cabinet.

theCab assumes ownership of the cabinet, so the client must not destroy it.

Parameters

theCab	The cabinet.
theKey	*(May be **NULL**)* The key name.
cabVal	*(May be **NULL**)* The **ASCab** to be stored in **theCab**. If **cabVal** is **NULL** then any value under **theKey** is destroyed and **theKey** is removed from **theCab**.

Return Value

None

Exceptions

genErrBadParm

Notifications

None

Header File

ASExtraCalls.h

Related Methods

ASCabGetCab
ASCabDetachCab

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASCabPutDouble

```
void ASCabPutDouble (ASCab theCab, const char* theKey,
double doubleValue);
```

Description

Stores a double value in **theCab** under **theKey**.

Parameters

theCab	The cabinet.
theKey	*(May be **NULL**)* The key name.
doubleValue	The value to be stored.

Return Value

None

Exceptions

genErrBadParm

Notifications

None

Header File

ASExtraCalls.h

Related Methods

ASCabGetDouble

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASCabPutInt

```
void ASCabPutInt (ASCab theCab, const char* theKey,
ASInt32 intValue);
```

Description

Stores an **ASInt32** value in **theCab** under **theKey**.

Parameters

theCab	The cabinet.
theKey	*(May be **NULL**)* The key name.
intValue	The value to be stored.

Return Value

None

Exceptions

genErrBadParm

Notifications

None

Header File

ASExtraCalls.h

Related Methods

ASCabGetInt

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASCabPutNull

```
void ASCabPutNull (ASCab theCab, const char* theKey);
```

Description

Stores a value with a type of **kASValueNull** in **theCab** under **theKey**. Null cabinet entries are used as placeholders or to removed other cabinet entries during an **ASCabMunge** operation.

Parameters

theCab	The cabinet.
theKey	The key name.

Return Value

None

Exceptions

genErrBadParm

Notifications

None

Header File

ASExtraCalls.h

Related Methods

None

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASCabPutPathName

```
void ASCabPutPathName (ASCab theCab, const char* theKey,
ASFileSys fileSys, ASPathName path);
```

Description

Stores an **ASPathName** in **theCab** under **theKey**.

theCab assumes ownership of the **ASPathName**, so the client need not call **ASFileSysReleasePath**.

Parameters

theCab	The cabinet.
theKey	*(May be **NULL**)* The key name.
fileSys	The **ASFileSys** from which path was obtained.
path	*(May be **NULL**)* The **ASPathName** to be stored. If **NULL**, the value (if any) stored under **theKey** in **theCab** is destroyed and **theKey** is removed from **theCab**.

Return Value

None

Exceptions

genErrBadParm

Notifications

None

Header File

ASExtraCalls.h

Related Methods

ASCabGetPathNameCopy
ASCabDetachPathName

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASCabPutPointer

```
void ASCabPutPointer (ASCab theCab, const char* theKey,
const char* theType, void* ptrValue,
ASCabPointerDestroyProc destroyProc);
```

Description

Stores a pointer in **theCab** under **theKey**. See **ASCab** description for more information.

Parameters

theCab	The cabinet.
theKey	*(May be **NULL**)* The key name.
theType	The data type referenced by the pointer. Since **ASCabPutPointer** is actually a macro, you should pass the type as literal name, not a string—e.g., **PDDoc**, not **"PDDoc"**. Pointers are always “typed” in that they always have associated with them a string indicating the type to which they point.
ptrValue	The value to be stored.
destroyProc	*(May be **NULL**)* A user-supplied callback which is called when the reference count associated with **thePtr** is zero.

Return Value

None

Exceptions

genErrBadParm
genErrNoMemory

Notifications

None

Header File

ASExtraCalls.h

Related Methods

ASCabGetPointer
ASCabDetachPointer

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASCabPutString

```
void ASCabPutString (ASCab theCab, const char* theKey,
char* theStr);
```

Description

Stores a string in **theCab** under **theKey**. A string consists of some number of bytes followed by a single null (zero) byte. The string must have been allocated using **ASmalloc**.

theCab assumes ownership of the string, so the client should not attempt to free the memory associated with it.

Parameters

theCab	The cabinet.
theKey	*(May be **NULL**)* The key name.
strValue	*(May be **NULL**)* The string to be stored. If **NULL**, the value (if any) stored under **theKey** in **theCab** is destroyed and **theKey** is removed from **theCab**.

Return Value

None

Exceptions

genErrBadParm

Notifications

None

Header File

ASExtraCalls.h

Related Methods

ASCabGetString
ASCabGetStringCopy
ASCabDetachString

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASCabPutText

```
void ASCabPutText (ASCab theCab, const char* theKey,
ASText theText);
```

Description

Stores an **ASText** object in **theCab** under **theKey**.

theCab assumes ownership of the object, so the client should not attempt to free the memory associated with it.

Parameters

theCab	The cabinet.
theKey	*(May be **NULL**)* The key name.
theText	*(May be **NULL**)* The object to be stored. If **NULL**, the value (if any) stored under **theKey** in **theCab** is destroyed and **theKey** is removed from **theCab**.

Return Value

None

Exceptions

genErrBadParm

Notifications

None

Header File

ASExtraCalls.h

Related Methods

ASCabGetText
ASCabDetachText

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASCabReadFromStream

```
ASCab ASCabReadFromStream (ASStm stm);
```

Description

Reads a previously written cabinet from a stream

Parameters

ASStm	Must be a stream opened through **ASFileStmRdOpen**, **ASMemStmRdOpen**, or **ASProcStmRdOpen**.

Return Value

The **ASCab**, or **NULL** if it could not be constructed.

Exceptions

None

Notifications

None

Header File

ASExtraCalls.h

Related Methods

ASCabWriteToStream

Example

```
// The following code snippet illustrates writing a cabinet
// out to a stream and reading it back in.

ASCab asCab;
ASFile asFile;
ASStm asStm;

... // Code to initialize asFile and create/populate asCab.

// Write the cabinet out to the stream.
asStm = ASFileStmWrOpen (asFile, 0);
ASCabWriteToStream (asCab, asStm);

// Destroy the cabinet and close the stream.
ASCabDestroy (asCab);
ASStmClose (asStm);

// Set the file position back to the start of the file.
ASFileSetPos (asFile, 0);

// Read the cabinet in from the stream.
stm = ASFileStmRdOpen (asFile, 0);
asCab = ASCabReadFromStream (asStm);

... // Eventually close the stream and destroy the cabinet.
```

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASCabRemove

```
void ASCabRemove (ASCab theCab, const char* theKey);
```

Description

Removes **theKey** entry from **theCab**, destroying the associated value.

Parameters

theCab	The cabinet.
theKey	The key name.

Return Value

None

Exceptions

genErrBadParm

Notifications

None

Header File

ASExtraCalls.h

Related Methods

None

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASCabRename

```
void ASCabRename (ASCab theCab, const char* oldKeyName, const
char* newKeyName);
```

Description

Renames a key within **theCab** while preserving the value associated with it. If there is already a key equal to **newKeyName** in **theCab**, its value will be destroyed and replaced with the value of **oldKeyName**.

Any attempt to move the item from one sub-cabinet to another will cause **ASCabRename** to raise an exception (e.g., **ASCabRename(theCab, "SubCab1:Key1", "SubCab2:Key1")** will raise). If this routine raises an exception **theCab** will be untouched.

Parameters

theCab	The cabinet.
oldKeyName	The key name to be changed.
newKeyName	The new name.

Return Value

None

Exceptions

genErrBadParm

Notifications

None

Header File

ASExtraCalls.h

Related Methods

None

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASCabValueEqual

```
ASBool ASCabValueEqual (ASCab cab1, const char* theKey1,
ASCab cab2, const char* theKey2);
```

Description

Compares two cabinet values and returns **true** if and only if they are equal—that is, have the same type and value. Cabinets are compared using **ASCabEqual**. **ASText** values are compared by using **ASTextCmp** and testing for a return value of **0** (zero). Strings and binary values must have the same lengths and byte-for-byte contents. Booleans, atoms, doubles, and integers must have equal values. Pointer values must point to the same location in memory (but may have different “destroyProcs” and type strings).

Parameters

cab1	The first cabinet.
theKey1	The key name.
cab2	The second cabinet.
theKey2	The key name.

Return Value

See above.

Exceptions

genErrBadParm

Notifications

None

Header File

ASExtraCalls.h

Related Methods

ASCabEqual

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASCabWriteToStream

```
void ASCabWriteToStream (ASCab theCab, ASStm theStm);
```

Description

Writes **theCab** out to a stream. The caller retains ownership of the cabinet. The stream will not be closed or flushed.

Parameters

theCab	The cabinet.
theStm	Must be a stream opened through **ASFileStmWrOpen** or **ASProcStmWrOpen**.

Return Value

None

Exceptions

genErrBadParm
fileErrWrite

Notifications

None

Header File

ASExtraCalls.h

Related Methods

ASCabReadFromStream

Example

```
// The following code snippet illustrates writing a cabinet
// out to a stream and reading it back in.

ASCab asCab;
ASFile asFile;
ASStm asStm;

... // Code to initialize asFile and create/populate asCab.

// Write the cabinet out to the stream.
asStm = ASFileStmWrOpen (asFile, 0);
ASCabWriteToStream (asCab, asStm);

// Destroy the cabinet and close the stream.
ASCabDestroy (asCab);
ASStmClose (asStm);

// Set the file position back to the start of the file.
ASFileSetPos (asFile, 0);

// Read the cabinet in from the stream.
stm = ASFileStmRdOpen (asFile, 0);
asCab = ASCabReadFromStream (asStm);

... // Eventually close the stream and destroy the cabinet.
```

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASCallback

ASCallbackCreate

```
ASCallback ASCallbackCreate (ASExtension extensionID,
void* proc);
```

Description

Creates a callback that allows the Acrobat viewer to call a function in a plug-in. All plug-in functions that are called by the Acrobat viewer must be converted to callbacks before being passed to the viewer.

Whenever possible, plug-ins should not call **ASCallbackCreate** directly, but should use the macros **ASCallbackCreateProto**, **ASCallbackCreateNotification**, and **ASCallbackCreateReplacement**. These macros (which eventually call **ASCallbackCreate**) have two advantages:

- They allow compilers to perform type checking, eliminating one extremely common source of plug-in bugs.
- They handle **extensionID** automatically.

NOTE: If you call ASCallbackCreate directly, you are actually invoking the ASCallbackCreate macro not this HFT routine. The ASCallbackCreate macro takes only one parameter, the proc, and passes that information into this underlying HFT routine as the second argument. The first argument is always set to **gExtensionID**, which should be the extension ID of your plug-in.

Plug-ins must use **ASCallbackCreate** directly, for example, when calling a Macintosh toolbox routine that expects a **ProcPtr**.

Parameters

extensionID	The **gExtensionID** extension that calls **proc**.
proc	The user-supplied procedure for which a callback is created.

Return Value

The newly-created callback.

Exceptions

None

Notifications

None

Header File

CorCalls.h

Related Methods

ASCallbackDestroy

Related Macros

ASCallbackCreateNotification
ASCallbackCreateReplacement
ASCallbackCreateProto

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

ASCallbackCreateNotification

```
ASCallback ASCallbackCreateNotification(nsel, proc);
```

Description

Macro that creates a callback for the specified notification.

Performs compile-time type-checking of the procedure if the **DEBUG** macro is nonzero.

Parameters

nsel	The name of the notification for which the callback is being created.
proc	A pointer to the user-supplied procedure for which a callback is created. The declaration of **proc** must be consistent with the notification with which it will be used (as specified by **nsel**).

Return Value

Needs to be saved so that it can be passed to **AVAppRegisterNotification** and **AVAppUnregisterNotification**, and destroyed after use with the method **ASCallbackDestroy**.

Header File

AVCalls.h

Related Macros

AVAppRegisterNotification
AVAppUnregisterNotification
ASCallbackDestroy
ASCallbackCreateReplacement
ASCallbackCreateProto
ACCB1
ACCB2
DEBUG

Related Methods

ASCallbackCreate

Example

```
ASCallback myNotification;
myNotification = ASCallbackCreateNotification(
AVDocDidOpen, myDocDidOpen);
```

ASCallbackCreateReplacement

```
ASCallback ASCallbackCreateReplacement(nsel, proc);
```

Description

Macro that creates a callback appropriate for use in replacing one of the Acrobat viewer's built-in methods. The method being replaced must be one of the **Replaceable Methods**.

Performs compile-time type-checking of the procedure if the **DEBUG** macro is nonzero.

Parameters

nsel	The name of the method for which the replacement callback is being created.
proc	A pointer to the user-supplied procedure for which a callback is created. The declaration of **proc** must be consistent with the method being replaced.

Header File

ASCalls.h

Related Macros

ASCallbackCreateNotification
ASCallbackCreateProto
REPLACE
CALL_REPLACED_PROC
ACCB1
ACCB2
DEBUG

Related Methods

ASCallbackCreate

Examples

```
ASCallback myAlertCallback;

myAlertCallback = ASCallbackCreateReplacement(AVAlertSEL, myAlert);
REPLACE(gAcroViewHFT, AVAlertSEL, myAlertCallback);
```

ASCallbackDestroy

```
void ASCallbackDestroy (ASCallback callback);
```

Description

Destroys a callback.

Parameters

callback	The callback to destroy.

Return Value

None

Exceptions

None

Notifications

None

Header File

CorCalls.h

Related Methods

ASCallbackCreate

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

ASExtension

ASEnumExtensions

```
ASExtension ASEnumExtensions (ASExtensionEnumProc proc,
void* clientData, ASBool onlyLivingExtensions);
```

Description

Enumerates all **ASExtension**s, that is, valid plug-ins.

Parameters

proc	User-supplied callback to call for each plug-in. Enumeration halts if **proc** returns **false**.
clientData	Pointer to user-supplied data to pass to **proc** each time it is called.
onlyLivingExtensions	If **true**, **ASExtension**s that have been unloaded or otherwise deactivated are not enumerated. If **false**, all **ASExtension**s are enumerated.

Return Value

If **proc** returned **false**, the last **ASExtension** that was enumerated. **NULL** otherwise.

Exceptions

None

Notifications

None

Header File

CorCalls.h

Related Methods

ASExtensionGetFileName
ASExtensionGetRegisteredName

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

ASExtensionGetFileName

```
ASInt32 ASExtensionGetFileName (ASExtension extension,
char* buffer, ASInt32 bufSize);
```

Description

Gets the filename of an **ASExtension**.

Parameters

extension	The **ASExtension** whose filename is obtained.
buffer	*(Filled by the method, may be **NULL**)* Pointer to a buffer for the filename. Pass **NULL** to have this method return the length of the filename (excluding a terminating **NULL** character).
bufSize	Number of bytes in **buffer**. Ignored if **buffer** is **NULL**.

Return Value

The number of characters written into **buffer**, excluding the **NULL** character.

Exceptions

None

Notifications

None

Header File

CorCalls.h

Related Methods

ASExtensionGetRegisteredName

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

ASExtensionGetRegisteredName

```
ASAtom ASExtensionGetRegisteredName (ASExtension extension);
```

Description

Gets the registered name associated with a plug-in.

Parameters

extension	The **ASExtension** whose name is obtained.

Return Value

An **ASAtom** representing the plug-in name, or **NULL** if the name could not be identified.

Exceptions

None

Notifications

None

Header File

CorCalls.h

Related Methods

ASExtensionGetFileName

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

ASFile

ASFileAcquirePathName

```
ASPathName ASFileAcquirePathName (ASFile file);
```

Description

Gets the pathname for **file** and increments an internal reference count. It is the caller's responsibility to release the **ASPathName** using **ASFileSysReleasePath** when it is no longer needed.

Parameters

file	The file whose pathname is acquired.

Return Value

The **ASPathName**. associated with **asFile**. You can use **ASFileSysDIPathFromPath** to convert this to a device-independent pathname.

Exceptions

None

Notifications

None

Header File

ASCalls.h

Related Methods

ASFileSysReleasePath

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

ASFileClose

```
ASInt32 ASFileClose (ASFile file);
```

Description

Closes the specified file. After a call to **ASFileClose**, the file handle is no longer valid but may be reused as the result of a subsequent call to **ASFileSysOpenFile.**

Parameters

file	The file to close. The file must have been opened previously using **ASFileSysOpenFile**.

Return Value

Zero if the operation was successful, otherwise some file system/platform dependent error code is returned.

Exceptions

None

Notifications

None

Header File

ASCalls.h

Related Methods

ASFileFlush
ASFileReopen
ASFileStmRdOpen
ASFileStmWrOpen
ASFileSysOpenFile

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

ASFileFlush

```
void ASFileFlush (ASFile file);
```

Description

Flushes any buffered data to a file. This method may raise file system/platform specific exceptions.

Parameters

file	The file whose data is flushed.

Return Value

None

Exceptions

fileErrIO

Notifications

None

Header File

ASCalls.h

Related Methods

None

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

ASFileFromMDFile

```
ASBool ASFileFromMDFile (ASMDFile fileID, ASFileSys fileSys,
ASFile* pFile);
```

Description

Gets the **ASFile** associated with the specified **ASMDFile** and **ASFileSys**.

Parameters

fileID	The **ASMDFile** for which the information is desired.
fileSys	The **ASFileSys** that **fileID** was opened through.
pFile	*(Filled by the method, may be **NULL**)* The **ASFile** representing **fileID** within **fileSys**.

Return Value

true if **fileID** is determined to be a valid file opened through **fileSys**, **false** otherwise.

Exceptions

None

Notifications

None

Header File

ASCalls.h

Related Methods

ASFileGetFileSys
ASFileGetMDFile

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00020002** or higher.

ASFileGetEOF

```
ASInt32 ASFileGetEOF (ASFile file);
```

Description

Gets the current size of a file.

Parameters

file	The **ASFile** whose size is obtained.

Return Value

The size of the file.

Exceptions

fileErrIO

Notifications

None

Header File

ASCalls.h

Related Methods

ASFileSetEOF
ASFileSetPos

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

ASFileGetFileSys

```
ASFileSys ASFileGetFileSys (ASFile file);
```

Description

Gets the file system that **file** was opened through.

Parameters

file	The open file whose file system is obtained.

Return Value

The file's **ASFileSys**.

Exceptions

None

Notifications

None

Header File

ASCalls.h

Related Methods

ASFileGetFileSysByName

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

ASFileGetMDFile

```
ASBool ASFileGetMDFile (ASFile file, ASMDFile* pFileID,
ASFileSys* pFileSys);
```

Description

Given an **ASFile**, returns the **fileSys** and the **ASMDFile** identification in that **fileSys**. This call is needed for a file system in a plug-in to be able to call the inner routines in another file system.

Parameters

file	The **ASFile** for which the information is desired.
pFileID	*(Filled by the method, may be **NULL**)* The **ASMDFile** identifier associated with **file**.
pFileSys	*(Filled by the method, may be **NULL**)* The file system that this **file** was opened through.

Return Value

true if **file** is an open file, **false** otherwise.

Exceptions

None

Notifications

None

Header File

ASCalls.h

Related Methods

ASFileFromMDFile
ASFileGetFileSys

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00020002** or higher.

ASFileGetOpenMode

```
ASUns16 ASFileGetOpenMode (ASFile file);
```

Description

Gets the file access mode(s) specified for **file** when it was opened.

Parameters

file	The file in question.

Return Value

Returns a value corresponding to one or more **ASFile Open Modes** used to access/create the file, as shown in the table:

ASFile Open Mode used to access the file	Return value from ASFileGetOpenMode
ASFILE_READ	**1** (readable)
ASFILE_WRITE	**2** (readable and writable)
ASFILE_READ|ASFILE_CREATE	**1** (readable)
ASFILE_WRITE|ASFILE_CREATE	**2** (readable and writable)
ASFILE_CREATE	**0** (created)

Exceptions

None

Notifications

None

Header File

ASCalls.h

Related Methods

None

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASFileGetPos

```
ASInt32 ASFileGetPos (ASFile file);
```

Description

Gets the current seek position in a file. This is the position at which the next read or write will begin.

Parameters

file	The file in which to get the seek position.

Return Value

The current seek position.

Exceptions

fileErrIO

Notifications

None

Header File

ASCalls.h

Related Methods

ASFileSetPos
ASFileRead
ASFileWrite

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

ASFileGetURL

```
char* ASFileGetURL (ASFile file);
```

Description

Returns the URL associated with **file**. It is the caller's responsibility to release the memory associated with the returned string using **ASfree**.

Parameters

file	The file in question.

Return Value

A buffer containing the URL or **NULL** if it could not be determined.

Exceptions

None

Notifications

None

Header File

ASCalls.h

Related Methods

None

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASFileHardFlush

```
void ASFileHardFlush (ASFile aFile);
```

Description

Causes a hard flush on a file. A “hard flush” means that the file is flushed to the physical destination. For example, if a WebDAV-based file is opened, **ASFileFlush** only flushes changes to the local cached version of the file. **ASFileHardFlush** would flush changes all the way to the WebDAV server.

Parameters

aFile	The file that is flushed.

Return Value

None

Exceptions

fileErrIO

Notifications

None

Header File

ASCalls.h

Related Methods

None

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASFileIsSame

```
ASBool ASFileIsSame (ASFile file, ASPathName path, ASFileSys fileSys);
```

Description

Performs a comparison between **file** and **path** to determine if they represent the same file. This method will return **false** if **file** was not opened through the **fileSys** file system.

NOTE: Adobe does not guarantee that this method will work on all file systems.

Parameters

file	The file in question.
path	The **ASPathName** in question.
fileSys	The file system from which **path** was obtained.

Return Value

false if the comparison fails, **true** otherwise.

Exceptions

None

Notifications

None

Header File

ASCalls.h

Related Methods

None

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASFilePushData

```
void ASFilePushData (ASFile file, const char* buffer,
ASInt32 offset, ASInt32 length);
```

Description

Sends data from a file system implementation to an **ASFile**. The data may be for an multi-read request call, or may be unsolicited.

This method can only be called from within file system implementation. It must not be called by clients of the **ASFile**, for example, by a caller that acquired the file with **ASFileSysOpenFile**.

Parameters

file	The file to which data is sent.
buffer	The data being pushed.
offset	Byte offset into **file** at which the data should be written.
length	The number of bytes held in **buffer**.

Return Value

None

Exceptions

fileErrGeneral

Notifications

None

Header File

ASCalls.h

Related Methods

ASFileRead
ASFileWrite

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to 0x00020002 or higher.

ASFileRead

```
ASInt32 ASFileRead (ASFile file, char* buffer, ASInt32 count);
```

Description

Reads data from a file, beginning at the current seek position.

Parameters

file	The file from which data is read.
buffer	*(Filled by the method)* A buffer into which data is written. The buffer must be able to hold at least **count** bytes.
count	The number of bytes to read.

Return Value

The number of bytes actually read from the file.

Exceptions

fileErrIO
fileErrUserRequestedStop
fileErrBytesNotReady
fileErrIOTimeout
fileErrGeneral

Notifications

None

Header File

ASCalls.h

Related Methods

ASFileSetPos
ASFileWrite

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

ASFileReopen

```
ASInt32 ASFileReopen (ASFile file, ASUns16 mode);
```

Description

Attempts to reopen a file using the specified read/write mode. On some platforms, this may result in the file being closed and then reopened, and thus some error conditions may leave **file** invalid.

Parameters

file	The file to reopen.
mode	An OR of the **ASFile Open Modes**.

Return Value

Zero if the operation was successful, otherwise some file system/platform dependent error code is returned.

Exceptions

None

Notifications

None

Header File

ASCalls.h

Related Methods

ASFileSysOpenFile

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

ASFileSetEOF

```
void ASFileSetEOF (ASFile file, ASInt32 newFileSize);
```

Description

Changes the size of a file. The new size may by larger or smaller than the original size. This method may raise file system/platform specific exceptions.

Parameters

file	The file whose size is changed.
newFileSize	The new size of **file.**

Return Value

fileErrIO

Exceptions

None

Notifications

None

Header File

ASCalls.h

Related Methods

ASFileGetEOF
ASFileGetPos

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

ASFileSetMode

```
ASUns32 ASFileSetMode (ASFile file, ASUns32 modeValue,
ASUns32 modeMask);
```

Description

Gets and/or sets the mode flags for a file. Pass **0** for **modeValue** and **modeMask** to simply get the current mode flags.

Parameters

file	The file for which to get and/or set the mode.
modeValue	The mode flag values to get or set, which are described in **ASFileMode Flags**.
modeMask	Mask for the mode flags to get or set.

Return Value

The previous value of the mode, or 0 if the file system does not support this operation.

Exceptions

None

Notifications

None

Header File

ASCalls.h

Related Methods

ASFileRead
ASFileSysOpenFile

Example

```
/* Get the current mode */
ASUns32 currentMode;
currentMode = ASFileSetMode(aFile, 0, 0);
/* Set the mode */
ASFileSetMode(aFile,
     kASFileModeDoNotYieldIfBytesNotReady,
     kASFileModeDoNotYieldIfBytesNotReady);
/* Clear the mode */
ASFileSetMode(aFile, 0,
     kASFileModeDoNotYieldIfBytesNotReady);
```

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00020002** or higher.

ASFileSetPos

```
void ASFileSetPos (ASFile file, ASInt32 pos);
```

Description

Seeks to the specified position in a file. This is the position at which the next read or write will begin.

Parameters

file	The file in which to seek.
pos	The position to seek.

Return Value

None

Exceptions

fileErrIO

Notifications

None

Header File

ASCalls.h

Related Methods

ASFileGetPos
ASFileRead
ASFileWrite

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

ASFileWrite

```
ASInt32 ASFileWrite (ASFile file, const char* buffer,
ASInt32 count);
```

Description

Writes data to a file, beginning at the current seek position.

Parameters

file	The file to which data is written.
buffer	A buffer holding the data that is to be written. The buffer must be able to hold at least **count** bytes.
count	The number of bytes to write.

Return Value

The number of bytes actually written to the file.

Exceptions

fileErrIO
fileErrWrite

Notifications

None

Header File

ASCalls.h

Related Methods

ASFileRead
ASFileSetPos

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

ASFileSys

ASFileGetFileSysByName

```
ASFileSys ASFileGetFileSysByName (ASAtom name);
```

Description

Gets the file system that was registered with the specified name.

Parameters

name	The **ASAtom** corresponding to the name of the file system to obtain.

Return Value

The file system, otherwise **NULL** if no matching file system was found.

Exceptions

None

Notifications

None

Header File

ASCalls.h

Related Methods

ASFileGetFileSys

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00020002** or higher.

ASFileRegisterFileSys

```
ASBool ASFileRegisterFileSys (ASExtension extension,
ASFileSys fileSys);
```

Description

Allows an implementor to provide a file system for use by external clients. An external client can locate the file system using **ASFileGetFileSysByName**. **fileSys** provides its name via the **ASFileSysGetFileSysNameProc** callback. This method returns **false** if a file system with the same name is already registered.

Parameters

extension	The **gExtensionID** of the plug-in registering the **fileSys**.
fileSys	The **fileSys** being registered.

Return Value

true if **fileSys** is successfully registered, **false** otherwise.

Exceptions

None

Notifications

None

Header File

ASCalls.h

Related Methods

ASFileUnregisterFileSys
ASFileGetFileSysByName

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00020002** or higher.

ASFileSysAcquireFileSysPath

```
ASPathName ASFileSysAcquireFileSysPath (ASFileSys oldFileSys,
ASPathName oldPathName, ASFileSys newFileSys);
```

Description

Converts an **ASPathName** from one file system to another. Returns an **ASPathName** acquired through **newFileSys** that refers to an image (possibly cached) of the file in **oldfileSys**. Use this call to get a local file that is an image of a remote file (in a URL file system, for example). This is needed by programs such as the Movie Player, because they can only work from local file-system files. The returned **ASPathName** may be a reference to a cache, so the file should be treated as read-only.

Because of the possibility of cache flushing, you must hold a copy of the remote file's **ASPathName** for the duration of use of the local file.

Do not remove the local file copy, since the **newFileSys** system does not know about the linkage to the remote (**oldFileSys**) file!

The source file does not have to be open.

This call is handled by **oldFileSys** if **oldFileSys** contains the appropriate procedure. Otherwise it is handled by copying the file. The source file is closed at the end of the copy if it was not open prior to the call.

It is the caller's responsibility to release the **ASPathName** using **ASFileSysReleasePath** when it is no longer needed.

Parameters

oldFileSys	*(May be **NULL**)* The file system from which **oldPathName** was obtained. Pass **NULL** to use the default file system.
oldPathName	The **ASPathname** in the current file system.
newFileSys	*(May be **NULL**)* The file system to which the **oldPathName** is converted. Pass NULL to use the default file system.

Return Value

The **ASPathName** in **newFileSys** or **NULL** if one can not be made.

Exceptions

ERR_NOMEMORY
fileErrIO
fileErrUserRequestedStop
fileErrBytesNotReady
fileErrIOTimeout
fileErrGeneral
fileErrWrite

Notifications

None

Header File

ASCalls.h

Related Methods

ASFileSysCreatePathName

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00020002** or higher.

ASFileSysAcquireParent

```
ASPathName ASFileSysAcquireParent (ASFileSys fileSys,
ASPathName pathName);
```

Description

Returns the parent folder of the file system object associated with **pathName**. The following rules apply in the default file systems:

- **pathName** may be associated with either a file or a folder.
- the file system object associated with **pathName** need not exist.

It is the caller's responsibility to release the returned **ASPathName**.

Parameters

fileSys	*(May be **NULL**)* The file system from which **pathName** was obtained. Pass **NULL** to use the default file system.
pathName	The **ASPathName**.

Return Value

The **ASPathName** associated with the parent folder. Will return **NULL** if the parent could not be returned.

Exceptions

genErrNoMemory
fileErrIO
fileErrUserRequestedStop
fileErrBytesNotReady
fileErrIOTimeout
fileErrGeneral
fileErrWrite

Notifications

None

Header File

ASCalls.h

Related Methods

ASFileSysCreatePathName

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASFileSysCopyPath

```
ASPathName ASFileSysCopyPath (ASFileSys fileSys,
ASPathName pathName);
```

Description

Generates a copies the specified **ASPathName** (but does not copy the file specified by the pathname). The **ASPathName** must have been obtained through the specified file system. This method may be used regardless of whether or not the file specified by **pathname** is open.

It is the caller's responsibility to release the **ASPathName** using **ASFileSysReleasePath** when it is no longer needed.

Parameters

fileSys	*(May be **NULL**)* The file system from which **pathName** was obtained. Pass **NULL** to use the default file system.
pathName	The **ASPathName** to copy.

Return Value

A copy of **pathName**.

Exceptions

None

Notifications

None

Header File

ASCalls.h

Related Methods

ASFileSysReleasePath

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

ASFileSysCreateFolder

```
ASInt32 ASFileSysCreateFolder (ASFileSys fileSys,
ASPathName path, ASBool recurse);
```

Description

Creates an empty folder at the specified **pathName**.

NOTE: There is a limitation on the Macintosh definition of **ASPathName** that restricts the amount of “non-existent” portions. On the Macintosh, you can have an **ASPathName** pointing to a non-existent file or a non-existent folder, but the parent of that file or folder must exist. In other words, only a “leaf” can be non-existent. This makes the **recurse** parameter largely meaningless on the Macintosh, so you are discouraged from using it on that platform for Acrobat 5.

Parameters

fileSys	*(May be **NULL**)* The file system from which **pathName** was obtained. Pass **NULL** to use the default file system.
path	The path of the folder to create.
recurse	Recursively create the parent folder if necessary. See note above.

Return Value

0 if the operation was successful, otherwise returns a nonzero platform-dependent error code.

Exceptions

genErrMethodNotImplemented
fileErrFNF

Notifications

None

Header File

ASCalls.h

Related Methods

ASFileSysRemoveFolder

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASFileSysCreatePathName

```
ASPathName ASFileSysCreatePathName (const ASFileSys fileSys,
ASAtom pathSpecType, const void* pathSpec,
const void* mustBeZero);
```

Description

Creates an **ASPathName** based on the input type and **pathSpec**. Each **fileSys** implementation must publish the input types that it accepts.

It is the caller's responsibility to release the **ASPathName** using **ASFileSysReleasePath** when it is no longer needed.

Developers should consider using the simpler helper macros instead of using the call directly. See the Related Macros section below.

Parameters

fileSys	*(May be **NULL**)* The **ASFileSystem** you are trying to create an **ASPathName** in. Pass **NULL** to use the default file system.
pathSpecType	An **ASAtom** specifying the data type in **pathSpec**, as follows: • "Cstring"—Accepted by the default file system on all platforms. **pathSpec** is a null-terminated **char***. On the Mac it must be an absolute path separated by colons, as in **VolumeName:Folder:file.pdf**. On Windows the path may be absolute, as in **C:\folder\file.pdf** or relative as in **...\folder\file.pdf**. On Unix the path may be absolute as in **/folder/file.pdf** or relative as in **.../folder/file.pdf**. • "FSSpec"—Accepted by the default file system on the Mac. **pathSpec** is a pointer to a valid FSSpec. • "SFReply"—In the past was accepted by the default file system on the Mac. This type is deprecated and should not be used. • "DIPath"—Accepted by the default file system on Windows and Mac. **pathSpec** is a device-independent path as documented in the *PDF Reference*. **pathSpec** can contain an absolute or relative path. If a relative path is used, the method will evaluate that path against an **ASPathName** passed in the **mustBeZero** parameter. • "FolderPathName"—Accepted by the default file system on Windows and Mac. **pathSpec** is an **ASPathName** that contains the path of a folder. **mustBeZero** is a C string containing the name of the file. The returned **ASPathName** contains the result of appending **mustBeZero** to **pathSpec**.

pathSpec	The file specification from which to create an **ASPathName**. Relative paths are evaluated from the directory containing the executable (if used with the PDF Library), or the directory containing Acrobat (if used in a plug-in).
mustBeZero	See **pathSpecType** parameter description.

Return Value

The newly-created pathname.

In Mac OS, returns a non-**NULL** newly-created pathname when given a **NULL**-pointer to an FSSpec, or **NULL** when given a **NULL**-pointer to a Cstring or an SFReply.

Exceptions

genErrBadParm on Windows if the **pathSpecType** is not recognized.
genErrMethodNotImplemented

Notifications

None

Header File

ASCalls.h

Related Methods

ASFileSysCopyPath

Related Macros

ASFileSysCreatePathFromCString
ASFileSysCreatePathFromDIPath
ASFileSysCreatePathFromFSSpec
ASFileSysCreatePathWithFolderName

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00020002** or higher.

ASFileSysDestroyFolderIterator

```
void ASFileSysDestroyFolderIterator (ASFileSys fileSys,
ASFolderIterator folderIter);
```

Description

Releases the resources associated with **folderIter**.

Parameters

fileSys	*(May be **NULL**)* The file system from which the iteration was started. Pass **NULL** to use the default file system.
folderIter	An **ASFolderIterator** object returned from a previous call to **ASFileSysFirstFolderItem**.

Return Value

None

Exceptions

None

Notifications

None

Header File

ASCalls.h

Related Methods

ASFileSysFirstFolderItem
ASFileSysNextFolderItem

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASFileSysDisplayStringFromPath

```
char* ASFileSysDisplayStringFromPath (ASFileSys fileSys,
ASPathName pathName);
```

Description

Returns a user-friendly representation of a path. It is the caller's responsibility to release the memory associated with the returned string using **ASfree**.

Parameters

fileSys	*(May be **NULL**)* The file system from which **pathName** was obtained. Pass **NULL** to use the default file system.
pathName	The **ASPathName** in question.

Return Value

A buffer containing the display string, or **NULL** if this operation is not supported by the file system or some error occurred. For example:

```
Windows: "C:\Folder\File"
Mac: "Hard Disk:Folder:File"
UNIX: "/Folder/File"
```

Exceptions

None

Notifications

None

Header File

ASCalls.h

Related Methods

None

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASFileSysDIPathFromPath

```
char* ASFileSysDIPathFromPath (ASFileSys fileSys,
ASPathName pathName, ASPathName relativeToThisPath);
```

Description

Converts a filename, specified as an **ASPathName**, to a device-independent pathname. It is the caller's responsibility to free the memory associated with the returned string using **ASfree**.

Parameters

fileSys	*(May be **NULL**)* The file system from which **pathName** was obtained. Pass **NULL** to use the default file system.
pathName	The **ASPathName** to convert.
relativeToThisPath	*(May be **NULL**)* The pathname relative to which the device-independent pathname is specified. If **NULL**, the device-independent pathname will be an absolute, not a relative, pathname.

Return Value

Device-independent pathname corresponding to the parameter values supplied, or **NULL** if the operation is not supported by the file system.

See Section 3.10 in the *PDF Reference* for a description of the device-independent pathname format. This pathname may not be understood on another platform since drive specifiers may be pre-pended.

Exceptions

None

Notifications

None

Header File

ASCalls.h

Related Methods

ASGetDefaultFileSys
ASFileSysPathFromDIPath

Example

```
char* temp;

temp = ASFileSysDIPathFromPath(
     ASGetDefaultFileSys(), path, NULL);
....
ASfree(temp);
```

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

ASFileSysFirstFolderItem

```
ASFolderIterator ASFileSysFirstFolderItem (ASFileSys fileSys,
ASPathName folderPath, ASFileSysItemProps itemProps,
ASPathName *itemPath);
```

Description

Creates an iterator which can be used to enumerate all objects inside the specified folder, and also returns the properties of the first item found in the folder. The iteration can be continued by passing the returned **ASFolderIterator** to **ASFileSysNextFolderItem**.

Both **itemProps** and **itemPath** are optional and may be **NULL** if you are not interested in that information.

The client is obligated to eventually free the resources associated with **ASFolderIterator** by calling **ASFileSysDestroyFolderIterator**.

NOTE: The order in which items are enumerated is implementation-dependent. In particular, note that items will probably not be iterated in alphabetic order.

NOTE: If items are added to or removed from a folder during iteration the results are implementation-dependent.

Parameters

fileSys	*(May be **NULL**)* The file system from which **folderPath** was obtained. Pass **NULL** to use the default file system.
folderPath	The path associated with the target folder.
itemProps	*(Filled by the method, may be **NULL**)* Properties structure describing the first object iterated.
itemPath	*(Filled by the method, may be **NULL**)* A newly-allocated **ASPathName** associated with the first object (which the client must free). Contains an absolute path.

Return Value

A valid **ASFolderIterator** object if **folderPath** contained any files. **NULL** will be returned if the folder is empty or the operation is not supported by the file system.

Exceptions

genErrBadParm

Windows default file system may raise: **fileErrFNF**, **asFileErrNotADir** or **ERR_NOMEMORY**

Notifications

None

Header File

ASCalls.h

Related Methods

ASFileSysNextFolderItem
ASFileSysDestroyFolderIterator

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASFileSysFlushVolume

```
ASInt32 ASFileSysFlushVolume (ASFileSys fileSys, ASPathName pathName);
```

Description

Flushes the volume on which the specified file resides. This ensures that any data written to the system for the volume containing **pathName** is flushed out to the physical volume (equivalent to the Macintosh **FlushVol** or to the UNIX **sync**).

Only the Mac OS default file system implements the callback associated with this method. This is a no-op on Windows and Unix.

Parameters

fileSys	*(May be **NULL**)* The file system from which **pathName** was obtained. Pass **NULL** to use the default file system.
pathName	The **ASPathName** the volume information is obtained from.

Return Value

0 if the operation was successful, otherwise returns a nonzero platform-dependent error code.

Exceptions

None

Notifications

None

Header File

ASCalls.h

Related Methods

None

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASFileSysGetItemProps

```
ASInt32 ASFileSysGetItemProps (ASFileSys fileSys, ASPathName
pathName, ASFileSysItemProps props);
```

Description

Populates an **ASFileSysItemProps** record with a full description of the file system object associated with **pathName**.

NOTE: The method clears the memory associated with **itemProps**, so the caller need not. However, see the note below for the **props** field.

Parameters

fileSys	*(May be **NULL**)* The file system from which **pathName** was obtained. Pass **NULL** to use the default file system.
pathName	The **ASPathName** associated with the object.
props	*(Filled by the method)* Properties structure describing the object. NOTE: The caller of **ASFileSysGetItemProps** must explicitly set the **props->size** field of the **ASFileSysItemProps struct** before calling this method.

Return Value

0 if no error was encountered; otherwise an error code is returned. If an error code is returned, **props** will not be filled with valid values. If no file system object is present, an error will not be reported—instead, the **props.isThere** field will be false.

Exceptions

genErrBadParm
genErrMethodNotImplemented

Notifications

None

Header File

ASCalls.h

Related Methods

None

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASFileSysGetNameFromPath

```
ASInt32 ASFileSysGetNameFromPath (ASFileSys fileSys,
ASPathName pathName, char* buffer, ASInt32 maxLength);
```

Description

Extracts the filename (including extension) from path.

Parameters

fileSys	*(May be **NULL**)* The file system from which **pathName** was obtained. Pass **NULL** to use the default file system.
pathName	The **ASPathName** associated with the file in question.
buffer	*(Filled by the method)* Buffer used to store the filename.
maxLength	Maximum number of bytes that **buffer** can hold.

Return Value

0 if the operation was successful, otherwise returns a nonzero platform-dependent error code. The buffer is returned as a host-encoded C string.

Exceptions

fileErrGeneral

Notifications

None

Header File

ASCalls.h

Related Methods

None

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASFileSysGetStorageFreeSpace

```
ASUns32 ASFileSysGetStorageFreeSpace (ASFileSys fileSys,
ASPathName pathName);
```

Description

Gets the amount of free space on the volume containing **pathName**.

Parameters

fileSys	*(May be **NULL**)* The file system from which **pathName** was obtained. Pass **NULL** to use the default file system.
pathName	The **ASPathName** in question.

Return Value

The amount of free space, in bytes, **0** otherwise. Because the free space is returned as an **ASUns32** it is limited to 4 GB.

Exceptions

None

Notifications

None

Header File

ASCalls.h

Related Methods

None

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASFileSysGetTempPathName

```
ASPathName ASFileSysGetTempPathName (ASFileSys fileSys,
ASPathName siblingPath);
```

Description

Returns an unique pathname suitable for use in creating temporary files. It is the caller's responsibility to release the returned **ASPathName**.

If siblingPath is non-**NULL**, the returned **ASPathName** is created at the same folder level as this path. Otherwise the standard temporary file location is used.

Parameters

fileSys	*(May be **NULL**)* The file system from which **siblingPath** was obtained. Pass **NULL** to use the default file system.
siblingPath	*(May be **NULL**)* An **ASPathName** indicating the desired location of the temporary pathname.

Return Value

The **ASPathName** if the operation was successful, **NULL** otherwise.

Exceptions

None

Notifications

None

Header File

ASCalls.h

Related Methods

None

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASFileSysGetTypeAndCreator

```
void ASFileSysGetTypeAndCreator (ASFileSys fileSys,
ASPathName path, unsigned long *type, unsigned long *creator)
```

Description

Gets the type and creator of the file specified by the path. See **Type/Creator Codes**.

NOTE: For Acrobat 5, only meaningful for the Macintosh default file system. Windows and UNIX always return **0**s for type and creator.

Parameters

fileSys	The file system containing the file for which the type and creator are needed.
path	The pathname of the file.
type	*(Filled by method)* The type of the file.
creator	*(Filled by method)* The creator of the file.

Return Value

None.

Exceptions

None

Notifications

None

Header File

ASCalls.h

Related Methods

ASFileSysSetTypeAndCreator

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASFileSysNextFolderItem

```
ASBool ASFileSysNextFolderItem (ASFileSys fileSys,
ASFolderIterator folderIter, ASFileSysItemProps itemProps,
ASPathName *itemPath);
```

Description

Continues the iteration process associated with the **ASFolderIterator** object.

Both **itemPath** and **itemProps** are optional and may be **NULL** if you are not interested in that information.

Parameters

fileSys	*(May be **NULL**)* The file system with which the iteration was started. Pass **NULL** to use the default file system.
folderIter	An **ASFolderIterator** object returned from a previous call to **ASFileSysFirstFolderItem**.
itemProps	*(Filled by the method, may be **NULL**)* Properties structure describing the next object in the iteration.
itemPath	*(Filled by the method, may be **NULL**)* A newly-allocated **ASPathName** associated with the object (which the client must free). Contains an absolute path.

Return Value

true if another object was found, **false** otherwise.

Exceptions

genErrBadParm
fileErrGeneral
ERR_NOMEMORY

Notifications

None

Header File

ASCalls.h

Related Methods

ASFileSysFirstFolderItem
ASFileSysDestroyFolderIterator

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASFileSysOpenFile

```
ASInt32 ASFileSysOpenFile (ASFileSys fileSys,
ASPathName pathName, ASUns16 mode, ASFile* pFile);
```

Description

Attempts to open a file in the specified file system, in the specified read/write/create mode. If the file is already open, the existing file handle is returned. The caller retains ownership of **pathName**.

In Mac OS, when this method creates a file, the file's creator is set to 'CARO' and its type is set to 'PDF ' (with a 'space' after PDF).

Parameters

fileSys	*(May be **NULL**)* The file system from which **pathname** was obtained. Pass **NULL** to use the default file system.
pathname	The pathname of the file to open.
mode	An OR of the **ASFile Open Modes**.
fP	*(Filled by the method)* The **ASFile** that was opened.

Return Value

0 if the operation was successful, otherwise returns a nonzero error code. The error is platform- and file-system specific.

Windows	Macintosh
Returns **fileErrWrPerm** if trying to open read-only file with write permissions.	Returns **fileErrFNF** if trying to open a file for reading that doesn't exist.
ErrSysMDSystem Errors (Windows) (**GetLastError()**) — Platform-specific error (any error condition that **CreateFile** may use).	**ErrSysMDSystem Errors (Macintosh)** (**iErr**) — Platform-specific error (any error that **FSpCreate**, **FSpSetFInfo**, **FSpOpenRF**, **FSpOpenDF**, or **SetFPos** may use).
Returns **fileErrGeneral** if the developer passed in an invalid **ASPathName**.	

Exceptions

genErrNoError

Notifications

None

Header File

ASCalls.h

Related Methods

ASFileClose
ASFileReopen
ASGetDefaultFileSys

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

ASFileSysPathFromDIPath

```
ASPathName ASFileSysPathFromDIPath (ASFileSys fileSys,
char* diPath, ASPathName relativeToThisPath);
```

Description

Converts a device-independent pathname to an **ASPathName**. This method can only be used for files that already exist (that is, it cannot be used to create a placeholder pathname for files that a plug-in intends to create in the future).

It is the caller's responsibility to release the returned **ASPathName**.

Parameters

fileSys	*(May be **NULL**)* The file system that the **ASPathName** will be created within. Pass **NULL** to use the default file system.
diPath	The device-independent pathname to convert. See Section 3.10 in the *PDF Reference* for a description of the device-independent pathname format. This pathname may not be understood on another platform since drive specifiers may be pre-pended. In Windows, you cannot specify a UNC pathname. You must have a file mounted on the file server. For example, the following path is valid: /f/dirname/file.pdf where **f** is`\\server\people`. The following does not work: `/server/people/dirname/file.pdf`
relativeToThisPath	Pathname relative to which **diPath** is interpreted. If **NULL**, **diPath** is interpreted as an absolute pathname, not a relative pathname.

Return Value

ASPathName corresponding to the parameter values supplied. Returns **NULL** if **diPath** cannot be converted to an **ASPathName**, for example if the specified file does not already exist.

Exceptions

genErrNoMemory

Notifications

None

Header File

ASCalls.h

Related Methods

ASFileSysDIPathFromPath
ASFileSysReleasePath

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

ASFileSysReleasePath

```
void ASFileSysReleasePath (ASFileSys fileSys,
ASPathName pathName);
```

Description

Decrements the internal reference count for **pathname** and disposes of the pathname (but not the file itself) if the reference count is zero. This does not result in any file-level operations, and is unaffected by whether or not there is an open file for this pathname.

Parameters

fileSys	*(May be **NULL**)* The file system from which **pathName** was obtained. Pass **NULL** to use the default file system.
pathName	The **ASPathName** to release.

Return Value

None

Exceptions

None

Notifications

None

Header File

ASCalls.h

Related Methods

None

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

ASFileSysRemoveFile

```
ASInt32 ASFileSysRemoveFile (ASFileSys fileSys,
ASPathName pathName);
```

Description

Attempts to remove the directory link for **pathName**.

Warning: If a file is already open for this **pathName**, the semantics of **ASFileSysRemoveFile** are file system-dependent. Make sure you've closed all **ASFile**s for **pathName** before calling **ASFileSysRemoveFile**.

Parameters

fileSys	*(May be **NULL**)* The file system from which **pathName** was obtained. Pass **NULL** to use the default file system.
pathName	The file to delete.

Return Value

Zero if the operation was successful, otherwise returns a nonzero platform-dependent error code.

Exceptions

None

Notifications

None

Header File

ASCalls.h

Related Methods

None

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

ASFileSysRemoveFolder

```
ASInt32 ASFileSysRemoveFolder (ASFileSys fileSys, ASPathName pathName);
```

Description

Removes the folder at the specified **pathName** only if it is empty.

Parameters

fileSys	*(May be **NULL**)* The file system from which **pathName** was obtained. Pass **NULL** to use the default file system.
path	The path of the folder to remove.

Return Value

0 if the operation was successful, otherwise returns a nonzero platform-dependent error code.

Exceptions

genErrMethodNotImplemented

Notifications

None

Header File

ASCalls.h

Related Methods

ASFileSysCreateFolder

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASFileSysSetTypeAndCreator

```
void ASFileSysSetTypeAndCreator (ASFileSys fileSys,
ASPathName path, unsigned long type, unsigned long creator);
```

Description

Sets the type and creator of a file. See **Type/Creator Codes**.

NOTE: As is the case for **ASFileSysGetTypeAndCreator**, this method only applies to the Macintosh default file system. Windows and UNIX make this a no-op.

Parameters

fileSys	The file system for which the type and creator are needed.
path	The pathname of the file.
type	The type of the file.
creator	The creator of the file.

Return Value

None.

Exceptions

None

Notifications

None

Header File

ASCalls.h

Related Methods

ASFileSysGetTypeAndCreator

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASFileSysURLFromPath

```
char* ASFileSysURLFromPath (ASFileSys fileSys,
ASPathName pathName);
```

Description

Returns the URL corresponding to **pathName**. It is the caller's responsibility to free the memory associated with the returned string using **ASfree**.

Parameters

fileSys	The file system from which **path** was obtained. Pass **NULL** to use the default file system.
path	The **ASPathName** in question.

Return Value

A buffer containing the URL, or **NULL** if some error occurred. The URL is in the standard "file://" URL style.

Exceptions

None

Notifications

None

Header File

ASCalls.h

Related Methods

None

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASFileUnregisterFileSys

```
ASBool ASFileUnregisterFileSys (ASExtension extension,
ASFileSys fileSys);
```

Description

Allows a **fileSys** to be unregistered. In general, a **fileSys** is only unregistered by the extension that registered it.

Parameters

extension	The **gExtensionID** of the plug-in un-registering **fileSys**.
fileSys	The **ASFileSys** to un-register.

Return Value

true if **fileSys** successfully unregistered, **false** if any there are any open files that were opened through **fileSys**.

Exceptions

None

Notifications

None

Header File

ASCalls.h

Related Methods

ASFileRegisterFileSys

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00020002** or higher.

ASGetDefaultFileSys

```
ASFileSys ASGetDefaultFileSys (void);
```

Description

Gets the default/standard file system implementation for a platform.

Parameters

None

Return Value

The platform's default file system.

Exceptions

None

Notifications

None

Header File

ASCalls.h

Related Methods

ASFileRegisterFileSys
ASPathFromPlatformPath

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to 0x00020000 or higher.

ASPathFromPlatformPath

```
ASPathName ASPathFromPlatformPath (void* platformPath);
```

Description

Converts a platform-specific pathname to an **ASPathName**. It can create an **ASPathName** from a file path where the file does *not* already exist. It works for Windows UNC pathnames as well.

It is the caller's responsibility to release the returned **ASPathName**

NOTE: Do not use this method on the Macintosh platform. Call **ASFileSysCreatePathName** instead. In fact, Adobe recommends that you always call **ASFileSysCreatePathName** instead of **ASPathFromPlatformPath**. **ASFileSysCreatePathName** provides all the functionality of **ASPathFromPlatformPath** and more.

Parameters

platformPath	Pointer to a platform-specific pathname. In Windows and Unix, it is a null-terminated string containing the full pathname with the appropriate path separators for each platform.

Return Value

The **ASPathName** corresponding to **platformPath**.

Exceptions

None

Notifications

None

Header File

ASCalls.h

Related Methods

ASFileSysReleasePath

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

ASStm

ASFileStmRdOpen

```
ASStm ASFileStmRdOpen (ASFile afile, ASUns16 bufSize);
```

Description

Creates a read-only **ASStm** from a file. The stream is seek-able.

Parameters

afile	The open file to associate with the stream. The file must have been opened previously using **ASFileSysOpenFile**. Each open file has an unique **ASFile**. The **ASFile** value has meaning only to the common **ASFile** implementation and bears no relationship to platform-specific file objects.
bufSize	Length of data buffer, in bytes. If **bufSize** = 0, the default buffer size (currently 4kB) will be used. The default is generally reasonable. A larger buffer size should be used only when data in the file will be accessed in chunks larger than the default buffer. Although **bufSize** is passed as an **ASUns16**, it is treated internally as an **ASInt16**. As a result, buffer sizes above 32kB are not permitted.

Return Value

The newly-created **ASStm**.

Exceptions

None

Notifications

None

Header File

ASCalls.h

Related Methods

ASFileSysOpenFile
ASFileStmWrOpen
ASMemStmRdOpen
ASProcStmRdOpen
ASStmClose

ASStmRead
CosNewStream

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

ASFileStmWrOpen

```
ASStm ASFileStmWrOpen (ASFile aFile, ASUns16 bufSize);
```

Description

Creates a writable **ASStm** from a file. The stream is seek-able.

Parameters

aFile	The open file to associate with the stream. The file must have been opened previously using **ASFileSysOpenFile**. Each open file has an unique **ASFile**. The **ASFile** value has meaning only to the common **ASFile** implementation and bears no relationship to platform-specific file objects.
bufSize	Length of a data buffer, in bytes. If **bufSize** = 0, the default buffer size (currently 4kB) is used. The default is generally reasonable. A larger buffer size should be used only when data in the file will be accessed in chunks larger than the default buffer. Although **bufSize** is passed as an **ASUns16**, it is treated internally as an **ASInt16**. As a result, buffer sizes above 32 KB are not permitted.

Return Value

The newly-created **ASStm**.

Exceptions

genErrNoMemory

Notifications

None

Header File

ASCalls.h

Related Methods

ASProcStmWrOpen
ASFileStmRdOpen
ASMemStmRdOpen
ASProcStmRdOpen
ASStmWrite
ASStmRead
ASStmClose
ASFileSysOpenFile
CosNewStream

Example

```
/* Create a writeable stream from an ASFile */
ASFile logFile;
ASStm writeLog;

writeLog = ASFileStmWrOpen (logFile, 0);

...

/* Be sure to close the stream (and the file) */
ASStmClose (writeLog);
```

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

ASMemStmRdOpen

```
ASStm ASMemStmRdOpen (char* data, ASUns32 len);
```

Description

Creates a read-only **ASStm** from a memory-resident buffer. The stream is seek-able.

Parameters

data	Buffer containing the data to read into the stream. This data buffer must not be disposed of until the **ASStm** is closed.
len	Length of data, in bytes.

Return Value

The newly-created **ASStm**.

Exceptions

None

Notifications

None

Header File

ASCalls.h

Related Methods

ASStmRead
ASStmClose
CosNewStream
ASMemStmRdOpen
ASProcStmRdOpen

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

ASProcStmRdOpen

```
ASStm ASProcStmRdOpen (ASStmProc readProc, void* clientData);
```

Description

Creates a read-only **ASStm** from an arbitrary data-producing procedure. The stream is not seek-able.

readProc is called when the client of the stream attempts to read data from it.

Parameters

readProc	User-supplied callback that supplies the stream's data.
clientData	Pointer to user-supplied data to pass to **readProc** each time it is called.

Return Value

The newly-created **ASStm**.

Exceptions

genErrNoMemory

Notifications

None

Header File

ASCalls.h

Related Methods

ASStmRead
ASStmClose
CosNewStream
ASFileStmRdOpen
ASMemStmRdOpen

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

ASProcStmWrOpen

```
ASStm ASProcStmWrOpen (ASStmProc writeProc,
ASProcStmDestroyProc destroyProc, void* clientData);
```

Description

Creates an **ASStm** from an arbitrary data-producing procedure. The stream is not seek-able.

Parameters

writeProc	User-supplied callback that provides the data for the stream.
destroyProc	User-supplied callback that destroys the specified **ASStm**. (Generally, this means de-allocating the memory associated with the **ASStm**.)
clientData	Pointer to user-supplied data to pass to **writeProc** each time it is called.

Return Value

The newly-created **ASStm**.

Exceptions

genErrNoMemory

Notifications

None

Header File

ASCalls.h

Related Methods

ASFileStmRdOpen
ASFileStmWrOpen
ASMemStmRdOpen
ASProcStmRdOpen
ASStmWrite
ASStmRead
ASStmClose
CosNewStream

Example

```
ACCB1 ASInt32 ACCB2 writeProc(char* data, ASInt32 nBytes,
void* clientData);
{
...
}

ACCBPROTO1 void ACCBPROTO2 destroyProc (void* clientData);
{
...
}

ASStm writeLog;

writeProcPtr = ASCallbackCreateProto(ASReportProc, writeProc);
destroyProcPtr = ASCallbackCreateProto(ASProcStmDestroyProc,
destroyProc);
writelog = ASProcStmWrOpen ( writeProc, destroyProc, void* clientData);
```

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

ASStmClose

```
void ASStmClose (ASStm stm);
```

Description

Closes the specified stream.

Parameters

stm	The stream to close.

Return Value

None

Exceptions

None

Notifications

None

Header File

ASCalls.h

Related Methods

ASFileStmRdOpen
ASFileStmWrOpen
ASMemStmRdOpen
ASProcStmRdOpen

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

ASStmRead

```
ASInt32 ASStmRead (char* buffer, ASInt32 itemSize,
ASInt32 nItems, ASStm stm);
```

Description

Reads data from **stm** into memory.

Parameters

buffer	*(Filled by the method)* Buffer into which data is written.
itemSize	Number of bytes in an item in the stream. See the description of **nItems** for further information.
nItems	Number of items to read. The amount of data read into the memory buffer will be **itemSize** × **nItems**, unless an **EOF** is encountered first. The relative values of **itemSize** and **nItems** really don't matter; the only thing that matters is their product. It is often convenient to set **itemSize** to 1, so that **nItems** is the number of bytes to read.
stm	The stream from which data is read.

Return Value

The number of items (not bytes) read.

Exceptions

None

Notifications

None

Header File

ASCalls.h

Related Methods

ASStmWrite

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

ASStmWrite

```
ASInt32 ASStmWrite (const char* buffer, ASInt32 itemSize,
ASInt32 nItems, ASStm stm);
```

Description

Writes data from a memory buffer into an **ASStm**.

You cannot use this method to change a PDF page contents stream—only a print stream.

Historically, this method was provided to allow plug-ins to write data into the print stream when printing to a PostScript printer (see the **PDDocWillPrintPage** notification). However, **ASStm** is a general purpose I/O mechanism in Acrobat, although only limited open and read/write methods are provided in the plug-in API. For instance, not all **ASStm** objects are seek-able.

Parameters

buffer	Buffer from which data is read.
itemSize	Number of bytes in an item in the stream. See the description of **nItems** for additional information.
nItems	Number of items to write. The amount of data written into the stream will be **itemSize** × **nItems**. The relative values of **itemSize** and **nItems** really don't matter; the only thing that matters is their product. It is often convenient to set **itemSize** to 1, so that **nItems** is the number of bytes to read.
stm	The stream into which data is written.

Return Value

The number of items (not bytes) written.

Exceptions

None

Notifications

None

Header File

ASCalls.h

Related Methods

ASStmRead

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

ASText

ASTextCat

```
void ASTextCat (ASText to, ASText from);
```

Description

Concatenates the **from** text to the end of the **to** text, altering **to** but not **from**. Does not change the language or country of **to**, unless it has no language or country in which case it acquires the language and country of **from**.

Parameters

to	The encoded text to which **from** is appended.
from	The encoded text to be appended to **to**.

Return Value

None

Exceptions

None

Notifications

None

Header File

ASExtraCalls.h

Related Methods

None

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASTextCatMany

```
void ASTextCatMany (ASText to, ...);
```

Description

Concatenates a series of **ASText** objects to the end of the **to** object. Be sure to provide a **NULL** as the last argument to the call.

Parameters

to	The **ASText** object to which the subsequent **ASText** arguments are concatenated

Return Value

None

Exceptions

Various

Notifications

None

Header File

ASExtraCalls.h

Related Methods

None

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASTextCmp

```
ASInt32 ASTextCmp (ASText str1, ASText str2);
```

Description

Compares two **ASText** objects. This routine can be used to sort text objects using the default collating rules of the underlying OS before presenting them to the user. The comparison is always case-insensitive.

Parameters

str1	First text object.
str2	Second text object.

Return Value

Returns a negative number if **str1** < **str2**, a positive number if **str1** > **str2**, and 0 if they are equal.

Exceptions

Various

Notifications

None

Header File

ASExtraCalls.h

Related Methods

None

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASTextCopy

```
void ASTextCopy (ASText to, ASText from);
```

Description

Copies the text in **from** to **to**, along with the country and language.

Parameters

to	Destination text object.
from	Source text object.

Return Value

None

Exceptions

None

Notifications

None

Header File

ASExtraCalls.h

Related Methods

None

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASTextDestroy

```
void ASTextDestroy (ASText str);
```

Description

Frees all memory associated with the text object.

Parameters

str	A text object.

Return Value

None

Exceptions

None

Notifications

None

Header File

ASExtraCalls.h

Related Methods

None

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASTextDup

```
ASText ASTextDup (ASText str);
```

Description

Creates a new **ASText** object that contains the same text/country/language as the one passed in.

Parameters

str	A string.

Return Value

An **ASText** object.

Exceptions

genErrBadParm if **str == NULL**.

Notifications

None

Header File

ASExtraCalls.h

Related Methods

None

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASTextFromEncoded

```
ASText ASTextFromEncoded (const char* str,
ASHostEncoding encoding);
```

Description

Creates a new text object from a null-terminated multi-byte string in the specified host encoding.

Parameters

str	The input string.
encoding	The host encoding

Return Value

An **ASText** object.

Exceptions

None

Notifications

None

Header File

ASExtraCalls.h

Related Methods

ASTextFromSizedEncoded

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASTextFromInt32

```
ASText ASTextFromInt32 (ASInt32 num);
```

Description

Create a new string from an **ASInt32** by converting the number to its decimal representation without punctuation or leading zeros.

Parameters

num	A value of type **ASInt32**..

Return Value

An **ASText** object.

Exceptions

None

Notifications

None

Header File

ASExtraCalls.h

Related Methods

ASTextFromUns32

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASTextFromPDText

```
ASText ASTextFromPDText (const char* str);
```

Description

Creates a new string from some PDF Text taken out of a PDF file. This is either a UTF-16 string with the **0xFEFF** pre-prended to the front or a **PDFDocEncoding** string. In either case the string is expected to have the appropriate **NULL**-termination. If the **PDText** is in UTF-16 it may have embedded language and country information; this will cause the **ASText** object to have its language and country codes set to the values found in the string.

Parameters

str	A string.

Return Value

An **ASText** object.

Exceptions

None

Notifications

None

Header File

ASExtraCalls.h

Related Methods

ASTextFromSizedPDText

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASTextFromScriptText

```
ASText ASTextFromScriptText (const char* str,
ASScript script);
```

Description

Creates a new string from a null-terminated multi-byte string of the specified script. This is a wrapper around **ASTextFromEncoded**; the script is converted to a host encoding using **ASScriptToHostEncoding**.

Parameters

str	A string.
script	The specified script

Return Value

An **ASText** object.

Exceptions

None

Notifications

None

Header File

ASExtraCalls.h

Related Methods

ASTextFromSizedScriptText

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASTextFromSizedEncoded

```
ASText ASTextFromSizedEncoded (const char* str, ASInt32 len,
ASHostEncoding encoding);
```

Description

Creates a new text object from a multi-byte string in the specified host encoding and of the specified length.

Parameters

str	A string.
len	Length in bytes.
encoding	The specified host encoding

Return Value

An **ASText** object.

Exceptions

genErrBadParm if len <0

Notifications

None

Header File

ASExtraCalls.h

Related Methods

ASTextFromEncoded

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASTextFromSizedPDText

```
ASText ASTextFromSizedPDText (const char* str,
ASInt32 length);
```

Description

Creates a new string from some PDF Text taken out of a PDF file. This is either a UTF-16 string with the **0xFEFF** pre-pended to the front or a **PDFDocEncoding** string. If the **PDText** is in UTF-16 it may have embedded language and country information; this will cause the **ASText** object to have its language and country codes set to the values found in the string. The length parameter specifies the size, in bytes, of the string. The string must not contain embedded null-characters.

Parameters

str	A string.
len	Length in bytes.

Return Value

An **ASText** object.

Exceptions

None

Notifications

None

Header File

ASExtraCalls.h

Related Methods

ASTextFromPDText

Availability

Available if **PI_ASEXTRA_VERSION** (in **PIRequir.h**) is set to **0x00050000** or higher.

ASTextFromSizedScriptText

```
ASText ASTextFromSizedScriptText (const char* str,
ASInt32 len, ASScript script);
```

Description

Creates a new text object from the specified multi-byte string of the specified script. This is a wrapper around **ASTextFromEncoded**; the script is converted to a host encoding using **ASScriptToHostEncoding**.

Parameters

str	A string.
len	Length in bytes.
script	The specified script

Return Value

An **ASText** object.

Exceptions

None

Notifications

None

Header File

ASExtraCalls.h

Related Methods

ASTextFromScriptText

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASTextFromSizedUnicode

```
ASText ASTextFromSizedUnicode (const ASUns16* ucs,
ASUnicodeFormat format, ASInt32 len);
```

Description

Creates a new text object from the specified Unicode string. This string is not expected to have **0xFE 0xFF** pre-pended, or country/language identifiers.

The string cannot contain an embedded null character.

Parameters

ucs	The Unicode string
format	The Unicode format of **ucs**.
len	The length of **ucs** in bytes.

Return Value

An **ASText** object.

Exceptions

genErrBadParm if **len** < **0**

Notifications

None

Header File

ASExtraCalls.h

Related Methods

ASTextFromUnicode

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASTextFromUnicode

```
ASText ASTextFromUnicode (const ASUns16* ucs,
ASUnicodeFormat format);
```

Description

Creates a new string from a null-terminated Unicode string. This string is not expected to have **0xFE 0xFF** pre-pended, or country/language identifiers.

Parameters

ucs	A Unicode string.
format	The Unicode format used by **ucs**.

Return Value

An **ASText** object.

Exceptions

None

Notifications

None

Header File

ASExtraCalls.h

Related Methods

ASTextFromSizedUnicode

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASTextFromUns32

ASText ASTextFromUns32 (ASUns32 num);

Description

Create a new string from an **ASUns32** by converting it to a decimal representation without punctuation or leading zeros.

Parameters

num	A value of type **ASUns32**..

Return Value

An **ASText** object.

Exceptions

None

Notifications

None

Header File

ASExtraCalls.h

Related Methods

ASTextFromInt32

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASTextGetBestEncoding

```
ASHostEncoding ASTextGetBestEncoding (ASText str,
ASHostEncoding preferredEncoding);
```

Description

Returns the best host encoding for representing the text. The best host encoding is the one that is least likely to lose characters during the conversion from Unicode to host. If the string can be represented accurately in multiple encodings (e.g., it is low-ASCII text that can be correctly represented in any host encoding), **ASTextGetBestEncoding** returns the preferred encoding based on the **preferredEncoding** parameter.

Parameters

str	An **ASText** string.
preferredEncoding	The preferred encoding. There is no default.

Return Value

The text encoding.

Exceptions

Various

Notifications

None

Header File

ASExtraCalls.h

Related Methods

ASTextGetBestScript

Examples

```
// If you prefer to use the app's language encoding...
ASHostEncoding bestEncoding = ASTextGetBestEncoding(text,
AVAppGetLanguageEncoding());

// If you prefer to use the OS encoding...
ASHostEncoding bestEncoding = ASTextGetBestEncoding(text,
(ASHostEncoding)PDGetHostEncoding());

// If you want to favor Roman encodings...
ASHostEncoding hostRoman = ASScriptToHostEncoding(kASRomanScript);
ASHostEncoding bestEncoding = ASTextGetBestEncoding(text, hostRoman);
```

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASTextGetBestScript

```
ASScript ASTextGetBestScript (ASText str,
ASScript preferredScript);
```

Description

Returns the best host script for representing the text. Functionality is similar to **ASTextGetBestEncoding** with resulting host encoding converted to a script code using **ASScriptFromHostEncoding**.

Parameters

str	An **ASText** string.
preferredScript	The preferred host script. There is no default.

Return Value

The best host script.

Exceptions

None

Notifications

None

Header File

ASExtraCalls.h

Related Methods

ASTextGetBestEncoding

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASTextGetCountry

```
ASUns16 ASTextGetCountry (ASText text);
```

Description

Retrieves the country associated with an **ASText** object.

Parameters

text	An **ASText** object.

Return Value

The country code.

Exceptions

None

Notifications

None

Header File

ASExtraCalls.h

Related Methods

ASTextSetCountry

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASTextGetEncoded

```
const char* ASTextGetEncoded (ASText str,
ASHostEncoding encoding);
```

Description

Returns a null-terminated string in the given encoding. The memory pointed to by this string is owned by the **ASText** object and may not be valid after additional operations are performed on the object.

Parameters

str	An **ASText** object.
encoding	The specified host encoding.

Return Value

A pointer to a null-terminated string corresponding to the text in **str**.

Exceptions

Various

Notifications

None

Header File

ASExtraCalls.h

Related Methods

ASTextGetEncodedCopy

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASTextGetEncodedCopy

```
char* ASTextGetEncodedCopy (ASText str,
ASHostEncoding encoding);
```

Description

Returns a copy of a string in a specified encoding.

Parameters

str	An **ASText** object.
encoding	The specified encoding

Return Value

A copy of the text in **str**. The client owns the resulting information and is responsible for freeing it using **ASfree**.

Exceptions

genErrNoMemory if memory couldn't be allocated for the copy.

Notifications

None

Header File

ASExtraCalls.h

Related Methods

ASTextGetEncoded

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASTextGetLanguage

```
ASUns16 ASTextGetLanguage (ASText text);
```

Description

Retrieves the language code associated with an **ASText** object.

Parameters

text	An **ASText** object.

Return Value

The language code.

Exceptions

None

Notifications

None

Header File

ASExtraCalls.h

Related Methods

ASTextSetLanguage

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASTextGetPDTextCopy

```
char* ASTextGetPDTextCopy (ASText str, ASInt32* len);
```

Description

Returns the text in a form suitable for storage in a PDF file. If the text can be represented using PDFDocEncoding it is; otherwise it is represented in big-endian UTF-16 format with **0xFE 0xFF** pre-pended to the front and any country/language codes embedded in an escape sequence right after **0xFE 0xFF**.

You can determine if the string is Unicode by inspecting the first two bytes. The Unicode case is used if the string has a language and country code set. The resulting string is null-terminated as appropriate. That is, one null byte for **PDFDocEncoding**, two for UTF-16.

Parameters

str	A string.
len	The length in bytes of the resulting string, not counting the null bytes at the end.

Return Value

A string copy. The client owns the resulting information and is responsible for freeing it with **ASfree**.

Exceptions

Various

Notifications

None

Header File

ASExtraCalls.h

Related Methods

None

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASTextGetScriptText

```
const char* ASTextGetScriptText (ASText str, ASScript script);
```

Description

Converts the Unicode string in the **ASText** object to the appropriate script and returns a pointer to the converted text. The memory pointed to is owned by the **ASText** object and must not be altered or destroyed by the client. The memory may also become invalid after subsequent operations are applied to the **ASText** object.

Parameters

str	A string.
script	The writing script.

Return Value

A string.

Exceptions

Various

Notifications

None

Header File

ASExtraCalls.h

Related Methods

ASTextGetScriptTextCopy

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASTextGetScriptTextCopy

```
char* ASTextGetScriptTextCopy (ASText str, ASScript script);
```

Description

Converts the Unicode string in the **ASText** object to the appropriate script and returns a pointer to the converted text. The memory pointed to is owned by the client who is responsible for freeing it using **ASfree**.

Parameters

str	A string.
script	A writing script.

Return Value

A string copy. The client owns the resulting information.

Exceptions

genErrNoMemory if memory couldn't be allocated for the copy.

Notifications

None

Header File

ASExtraCalls.h

Related Methods

ASTextGetEncodedCopy
ASTextGetScriptText

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASTextGetUnicode

```
const ASUns16* ASTextGetUnicode (ASText str);
```

Description

Returns a pointer to a string in **kUTF16HostEndian** format. The memory pointed to by this string is owned by the **ASText** object and may not be valid after additional operations are performed on the object.

The Unicode text returned will not have **0xFE 0xFF** pre-pended or any language or country codes.

Parameters

str	A string.

Return Value

See above.

Exceptions

None

Notifications

None

Header File

ASExtraCalls.h

Related Methods

ASTextGetUnicodeCopy

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASTextGetUnicodeCopy

```
ASUns16* ASTextGetUnicodeCopy (ASText str,
ASUnicodeFormat format);
```

Description

Returns a pointer to a null-terminated string in the specified Unicode format. The memory pointed to by this string is owned by the client who can modify it at will and is responsible for destroying it using **ASfree**.

The Unicode text returned will not have **0xFE 0xFF** pre-pended or any language or country codes.

Parameters

str	A string.
format	Unicode format.

Return Value

A string copy. The client owns the resulting information.

Exceptions

genErrNoMemory if memory couldn't be allocated for the copy.

Notifications

None

Header File

ASExtraCalls.h

Related Methods

ASTextGetUnicode

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASTextIsEmpty

```
ASBool ASTextIsEmpty (ASText str);
```

Description

Used to determine whether the **ASText** object contains no text—e.g., if retrieving Unicode text would yield a 0-length string.

Parameters

str	A string.

Return Value

Returns **true** if the **ASText** object contains no text.

Exceptions

None

Notifications

None

Header File

ASExtraCalls.h

Related Methods

None

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASTextMakeEmpty

```
void ASTextMakeEmpty (ASText str);
```

Description

Removes the contents of an **ASText** (turns it into an empty string).

Return Value

None

Exceptions

None

Notifications

None

Header File

ASExtraCalls.h

Related Methods

None

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASTextNew

```
ASText ASTextNew (void);
```

Description

Creates a new text object containing no text.

Return Value

An **ASText** object.

Exceptions

genErrNoMemory

Notifications

None

Header File

ASExtraCalls.h

Related Methods

None

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASTextNormalizeEndOfLine

```
void ASTextNormalizeEndOfLine (ASText text);
```

Description

Replaces all end-of-line characters within the **ASText** object with the correct end-of-line character for the current platform—e.g., for Windows, **\r** and **\n** are replaced with **\r\n**.

Parameters

text	An object of type **ASText**.

Return Value

None

Exceptions

None

Notifications

None

Header File

ASExtraCalls.h

Related Methods

None

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASTextReplace

```
void ASTextReplace (ASText src, ASText toReplace,
ASText replacement);
```

Description

Replaces all occurrences of **toReplace** in **src** with the text specified in **replacement**. **ASTextReplace** uses an **ASText** string to indicate the **toReplace** string; **ASTextReplaceASCII** uses a low-ASCII Roman string to indicate the text to replace.

Parameters

src	Source text.
toReplace	Text in source text to replace.
replacement	Text used in replacement.

Return Value

None

Exceptions

Various

Notifications

None

Header File

ASExtraCalls.h

Related Methods

ASTextReplaceASCII

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASTextReplaceASCII

```
void ASTextReplaceASCII (ASText src, const char* toReplace,
ASText replacement);
```

Description

Replaces all occurrences of **toReplace** in **src** with the text specified in **replacement**. **ASTextReplace** uses an **ASText** string to indicate the **toReplace** string; **ASTextReplaceASCII** uses a low-ASCII Roman string to indicate the text to replace.

This call is intended for formatting strings for the user interface—e.g., replacing a known sequence such as “%1” with other text. Be sure to use only low-ASCII characters, which are safe on all platforms. Avoid using backslash and currency symbols.

Parameters

src	The **ASText** object containing the text.
toReplace	The text to replace.
replacement	The replacement text.

Return Value

None

Exceptions

Various

Notifications

None

Header File

ASExtraCalls.h

Related Methods

ASTextReplace

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASTextSetCountry

```
void ASTextSetCountry (ASText text, ASUns16 country);
```

Description

ASText objects can have country and language codes associated with them. These can be explicitly set or parsed from the Unicode form of **PDText** strings. This method allows you to set the language codes associated with a piece of text.

Parameters

text	An **ASText** object.
country	Country code.

Return Value

None

Exceptions

None

Notifications

None

Header File

ASExtraCalls.h

Related Methods

ASTextGetCountry

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASTextSetEncoded

```
void ASTextSetEncoded (ASText str, const char* text,
ASHostEncoding encoding);
```

Description

Replaces the contents of an existing **ASText** object with a null-terminated multi-byte string in the specified host encoding.

Parameters

str	**ASText** object to hold the string.
text	Pointer to text string.
encoding	Type of encoding.

Return Value

None

Exceptions

genErrBadParm if **text** = **NULL**

Notifications

None

Header File

ASExtraCalls.h

Related Methods

ASTextSetSizedEncoded

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASTextSetLanguage

```
void ASTextSetLanguage (ASText text, ASUns16 language);
```

Description

Sets the language codes associated with a piece of text.

Parameters

text	An **ASText** object.
language	Language code.

Return Value

None

Exceptions

None

Notifications

None

Header File

ASExtraCalls.h

Related Methods

ASTextGetLanguage

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASTextSetPDText

```
void ASTextSetPDText (ASText str, const char* text);
```

Description

Alters an existing string from some PDF text taken out of a PDF file. This is either a big-endian UTF-16 string with the **0xFEFF** pre-pended to the front or a **PDFDocEncoding** string. In either case the string is expected to have the appropriate null termination. If the **PDText** is in UTF-16 it may have embedded language and country information; this will cause the **ASText** object to have its language and country codes set to the values found in the string.

Parameters

str	A string.
text	Text string.

Return Value

None

Exceptions

None

Notifications

None

Header File

ASExtraCalls.h

Related Methods

ASTextSetSizedPDText

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASTextSetScriptText

```
void ASTextSetScriptText (ASText str, const char* text,
ASScript script);
```

Description

Alters an existing string from a null-terminated multi-byte string of the specified script. This is a wrapper around **ASTextFromEncoded**; the script is converted to a host encoding using **ASScriptToHostEncoding**.

Parameters

str	A string.
text	Pointer to text string.
script	The writing script.

Return Value

None

Exceptions

None

Notifications

None

Header File

ASExtraCalls.h

Related Methods

ASTextSetSizedScriptText

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASTextSetSizedEncoded

```
void ASTextSetSizedEncoded (ASText str, const char* text,
ASInt32 len, ASHostEncoding encoding);
```

Description

Alters an existing string from a multi-byte string in the specified host encoding and of the specified length. This text does not need to be null-terminated, and no null (zero) bytes should appear in the characters passed in.

Parameters

str	A string.
text	Pointer to text string.
len	Length of text string.
encoding	Host encoding type.

Return Value

None

Exceptions

genErrBadParm if **text** = **NULL**

Notifications

None

Header File

ASExtraCalls.h

Related Methods

ASTextSetEncoded

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASTextSetSizedPDText

```
void ASTextSetSizedPDText (ASText str, const char* text,
ASInt32 length);
```

Description

Replaces the contents of an existing **ASText** object with PDF text taken out of a PDF file. This is either a big-endian UTF-16 string with the **0xFEFF** pre-pended to the front or a **PDFDocEncoding** string. In either case the length parameter indicates the number of bytes in the string. The string should not be null-terminated and must not contain any null characters. If the **PDText** is in UTF-16 it may have embedded language and country information; this will cause the **ASText** object to have its language and country codes set to the values found in the string.

Parameters

str	A string.
text	Pointer to a text string.
length	Length of the text string.

Return Value

None

Exceptions

None

Notifications

None

Header File

ASExtraCalls.h

Related Methods

ASTextSetPDText

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASTextSetSizedScriptText

```
void ASTextSetSizedScriptText (ASText str, const char* text,
ASInt32 len, ASScript script);
```

Description

Replaces the contents of an existing **ASText** object with the specified multi-byte string of the specified script. This is a wrapper around **ASTextFromSizedEncoded**; the script is converted to a host encoding using **ASScriptToHostEncoding**.

Parameters

str	A string.
text	Pointer to a text string.
len	Length of the text string.
script	The writing script.

Return Value

None

Exceptions

genErrBadParm if **text==NULL**

Notifications

None

Header File

ASExtraCalls.h

Related Methods

None

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASTextSetSizedUnicode

```
void ASTextSetSizedUnicode (ASText str,
const ASUns16* ucsValue, ASUnicodeFormat format, ASInt32 len);
```

Description

Replaces the contents of an existing **ASText** object with the specified Unicode string. This string is not expected to have **0xFE 0xFF** pre-pended or embedded country/language identifiers.

The string cannot contain a null character.

Parameters

str	*(Filled by the method)* A string.
ucsValue	A Unicode string.
format	The Unicode format.
len	Length of the string in bytes.

Return Value

None

Exceptions

None

Notifications

None

Header File

ASExtraCalls.h

Related Methods

ASTextSetUnicode

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASTextSetUnicode

```
void ASTextSetUnicode (ASText str, const ASUns16* ucsValue,
ASUnicodeFormat format);
```

Description

Alters an existing string from a null-terminated Unicode string. This string is not expected to have **0xFE 0xFF** pre-pended or embedded country/language identifiers.

Parameters

str	*(Filled by the method)* A string.
ucsValue	A Unicode string.
format	The Unicode format.

Return Value

None

Exceptions

None

Notifications

None

Header File

ASExtraCalls.h

Related Methods

ASTextSetSizedUnicode

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

Configuration

ASGetConfiguration

```
void* ASGetConfiguration (ASAtom key);
```

Description

Gets information about the Acrobat viewer application under which the plug-in is running. Use this method if your plug-ins functionality depends on which Acrobat viewer it is running under.

Parameters

key	Configuration parameter being requested. Must be one of the "selectors" listed in the table below. Use the **CanEdit** selector (not the **Product** selector) to determine the functionality available, because product names may change while functionality remains the same.

Selector	Type of return value	Description
CanEdit	**ASBool**	Whether or not editing is allowed. Checking this is the correct way to determine whether one is in an editing environment (for example, Acrobat viewer) as opposed to a non-editing environment (for example, Reader).
Product	**const char ***	Returns the type of Acrobat applications: "Reader", "Exchange", or "Acrobat PDF Library". The quotes are shown for clarity only; they are not part of the name that is returned. Do not rely on the product name to determine whether or not the product can edit files; use the **CanEdit** selector to do this.

Return Value

The return value's type depends on what was requested. See table, above. Cast the return value to the type you are expecting, based on the selector you pass in. If an unknown value is passed as **key**, the value **UNDEFINED_CONFIGURATION_SELECTOR** is returned (see CoreExpT.h).

Exceptions

None

Notifications

None

Header File

CorCalls.h

Related Methods

None

Example

```
prodName = ASGetConfiguration(
     ASAtomFromString("Product"))
```

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

Errors

ASGetErrorString

```
const char* ASGetErrorString (ASInt32 errorCode, char* buffer,
ASInt32 maxLength);
```

Description

Gets a string describing the specified error/exception.

Parameters

errorCode	The exception whose error string is obtained. This must be a full error code, built with the **ErrBuildCode** macro or a user-defined exception returned from **ASRegisterErrorString**. See **Errors** for a list of predefined exceptions.
buffer	*(Filled by the method)* Buffer into which the string is written.
maxLength	The number of characters that **buffer** can hold.

Return Value

A useful pointer to buffer, or **NULL** if the error is not known.

Exceptions

None

Notifications

None

Header File

ASCalls.h

Related Methods

ASGetExceptionErrorCode
ASRegisterErrorString
ASRaise

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

ASGetExceptionErrorCode

```
ASInt32 ASGetExceptionErrorCode (void);
```

Description

Gets the error code for the exception most recently raised.

Parameters

None

Return Value

Exception error code. See **Errors** for a list of predefined exceptions.

Exceptions

None

Notifications

None

Header File

CorCalls.h

Related Methods

ASRaise
ASGetErrorString
ASRegisterErrorString

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

ASPopExceptionFrame

```
void ASPopExceptionFrame (void);
```

Description

Pops an exception frame off the stack.

NOTE: You will probably never call **ASPopExceptionFrame** directly; it is called for you as appropriate from within the **HANDLER**, **E_RETURN** and **E_RTRN_VOID** macros.

Parameters

None

Return Value

None

Exceptions

None

Notifications

None

Header File

CorCalls.h

Related Methods

None

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

ASPushExceptionFrame

```
void ASPushExceptionFrame (void* asEnviron,
ACRestoreEnvironProc restoreFunc);
```

Description

Pushes an exception frame buffer and a frame-restoration callback onto the stack. The **restoreFunc** should be a function matching the following prototype:

NOTE: You will probably never call **ASPushExceptionFrame** directly; use the **DURING** macro instead.

Parameters

asEnviron	Represents a stack environment that is restored if an exception occurs. On Windows and Macintosh, this is a **jmp_buf**; A **jmp_buf** is an array of integers.
restoreFunc	Should be a function matching the following prototype: **ACCB1 void ACCB2 RestorePlugInFrame(void* asEnviron)**

Return Value

None

Exceptions

None

Notifications

None

Header File

CorCalls.h

Related Methods

None

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

ASRaise

```
void ASRaise (ASInt32 error);
```

Description

Raises an exception. Plug-ins can raise any exception defined in the **AcroErr.h** header file using the **ErrBuildCode** macro, or can define their own exceptions using **ASRegisterErrorString**. See **Errors** for a list of predefined exceptions.

If the code that calls **ASRaise** gets control as a result of a non-Acrobat event (such as a drag and drop event on some platforms), this method fails since there is no Acrobat viewer code in the stack to handle the exception.

Parameters

error	Error code for the exception to raise. Error codes have three parts: severity, system, and error number. Use **ErrBuildCode** to build an error code for an existing error.

Return Value

None

Exceptions

None

Notifications

None

Header File

CorCalls.h

Related Methods

ASGetErrorString
ASRegisterErrorString

Related Macros

RERAISE

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

ASRegisterErrorString

```
ASInt32 ASRegisterErrorString (ASErrSeverity severity,
const char* errorString);
```

Description

Registers a new error and string. The error can be used to raise a plug-in-specific exception using **ASRaise**. When the exception is raised, its error string can be retrieved using **ASGetErrorString** and reported to the user using **AVAlertNote**.

The error system is automatically forced to be **ErrSysXtn.** (See the list of **Error Systems**.)

The error is automatically assigned an error code that is not used by any other plug-in (in the current implementation, the Acrobat viewer increments a counter each time any plug-in requests an error code, and returns the value of the counter). As a result, plug-ins cannot rely on being assigned the same error code each time the Acrobat viewer is launched.

Parameters

severity	The severity of the error being defined. Must be one of the **Severities**.
errorString	The string describing the exception. This string is used by **ASGetErrorString**. **errorString** is copied by **ASRegisterErrorString**; it may be freed by the plug-in after registering the error.

Return Value

The newly-created error code. Plug-ins should assign the error code returned by this method to a variable if they wish to use the error code later in the current session.

Exceptions

None

Notifications

None

Header File

ASCalls.h

Related Methods

ASGetErrorString
ASRaise

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

Fixed Point Math

ASCStringToFixed

```
ASFixed ASCStringToFixed (const char* s);
```

Description

Converts a Cstring to a fixed point number. Processes the string from left to right only until the first invalid character is located (for example, a-z, A-Z).

Parameters

s	A Cstring to convert.

Return Value

Fixed number corresponding to **s**. Returns 0 if the string does not contain any valid number.

Exceptions

None

Notifications

None

Header File

ASCalls.h

Related Methods

ASFixedToCString

Related Macros

ASFixedRoundToInt16
ASFixedRoundToInt32
ASFixedTruncToInt16
ASFixedTruncToInt32
ASFixedToFloat

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

ASFixedDiv

```
ASFixed ASFixedDiv (ASFixed a, ASFixed b);
```

Description

Divides two fixed numbers.

Parameters

a, b	The two numbers to divide.

Return Value

The quotient **a / b**.

Exceptions

None

Notifications

None

Header File

ASCalls.h

Related Methods

ASFixedMul

Related Macros

Fixed Numbers
ASFixedRoundToInt16
ASFixedRoundToInt32
ASFixedTruncToInt16
ASFixedTruncToInt32
ASFixedToFloat
ASFloatToFixed
ASInt16ToFixed
ASInt32ToFixed

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

ASFixedMatrixConcat

```
void ASFixedMatrixConcat (ASFixedMatrixP result,
const ASFixedMatrixP m1, const ASFixedMatrixP m2);
```

Description

Multiplies two matrices.

Parameters

result	*(Filled by the method)* Pointer to matrix **m2** × **m1**. It is OK for **result** to point to the same location as either **m1** or **m2**.
m1, m2	Pointers to the **ASFixedMatrix** values for the two matrices to multiply.

Return Value

None

Exceptions

None

Notifications

None

Header File

ASCalls.h

Related Methods

ASFixedMatrixInvert
ASFixedMatrixTransform
ASFixedMatrixTransformRect

Related Macros

Fixed Numbers
ASFixedRoundToInt16
ASFixedRoundToInt32
ASFixedTruncToInt16
ASFixedTruncToInt32
ASFixedToFloat
ASFloatToFixed
ASInt16ToFixed
ASInt32ToFixed

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

ASFixedMatrixInvert

```
void ASFixedMatrixInvert (ASFixedMatrixP result,
const ASFixedMatrixP m);
```

Description

Inverts a matrix.

If a matrix is nearly singular (that is, has a determinant nearly zero), inverting and re-inverting the matrix may not yield the original matrix.

Parameters

result	*(Filled by the method)* Pointer to **m**-1. It is OK for *result* to point to the same location as **m**.
m	Pointer to the **ASFixedMatrix** to invert.

Return Value

None

Exceptions

None

Notifications

None

Header File

ASCalls.h

Related Methods

ASFixedMatrixConcat
ASFixedMatrixTransform
ASFixedMatrixTransformRect

Related Macros

ASFixedRoundToInt16
ASFixedRoundToInt32
ASFixedTruncToInt16
ASFixedTruncToInt32
ASFixedToFloat

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

ASFixedMatrixTransform

```
void ASFixedMatrixTransform (ASFixedPointP result,
const ASFixedMatrixP m, const ASFixedPointP p);
```

Description

Transforms the point **p** through the matrix **m**, puts result in **result. p** and **result** can point to the same place.

Parameters

result	*(Filled by the method)* Pointer to the **ASFixedPoint** containing the result of transforming **p** through **m**. It is OK for **result** to point to the same location as **m**.
m	Pointer to the **ASFixedMatrix** through which **p** is transformed.
p	Pointer to the **ASFixedPoint** representing the point to transform through **m**.

Return Value

None

Exceptions

None

Notifications

None

Header File

ASCalls.h

Related Methods

ASFixedMatrixTransformRect
ASFixedMatrixConcat
ASFixedMatrixInvert

Related Macros

Fixed Numbers
ASFixedRoundToInt16
ASFixedRoundToInt32
ASFixedTruncToInt16
ASFixedTruncToInt32
ASFixedToFloat
ASFloatToFixed
ASInt16ToFixed

ASInt32ToFixed

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to 0x00020000 or higher.

ASFixedMatrixTransformRect

```
void ASFixedMatrixTransformRect (ASFixedRectP result,
const ASFixedMatrixP m, const ASFixedRectP rectIn);
```

Description

Transforms a rectangle through a matrix.

Parameters

result	*(Filled by the method)* Pointer to the **ASFixedRect** containing the smallest bounding box for the transformed rectangle. It is OK for **result** to point to the same location as **m**. **result** will always have **bottom** < **top** and **left** < **right**.
m	Pointer to the **ASFixedMatrix** containing the matrix through which **r** is transformed.
rectIn	Pointer to the **ASFixedRect** containing the rectangle to transform through **m**.

Return Value

None

Exceptions

None

Notifications

None

Header File

ASCalls.h

Related Methods

ASFixedMatrixTransform
ASFixedMatrixConcat
ASFixedMatrixInvert

Related Macros

Fixed Numbers
ASFixedRoundToInt16
ASFixedRoundToInt32
ASFixedTruncToInt16
ASFixedTruncToInt32
ASFixedToFloat
ASFloatToFixed

ASInt16ToFixed
ASInt32ToFixed

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

ASFixedMul

```
ASFixed ASFixedMul (ASFixed a, ASFixed b);
```

Description

Multiplies two fixed numbers.

Parameters

a, b	The two numbers to multiply.

Return Value

The product of **a** and **b**.

Exceptions

None

Notifications

None

Header File

ASCalls.h

Related Methods

ASFixedDiv

Related Macros

Fixed Numbers
ASFixedRoundToInt16
ASFixedRoundToInt32
ASFixedTruncToInt16
ASFixedTruncToInt32
ASFixedToFloat
ASFloatToFixed
ASInt16ToFixed
ASInt32ToFixed

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

ASFixedToCString

```
void ASFixedToCString (ASFixed f, char* s,
os_size_t maxLength, ASInt16 precision);
```

Description

Converts a fixed number to a Cstring.

Parameters

f	The fixed number to convert.
s	*(Filled by the method)* The string corresponding to **f**.
maxLength	The maximum number of characters that **s** can contain.
precision	The number of digits to retain in the converted number. NOTE: The precision for Mac OS numbers is valid to 9 significant digits.

Return Value

None

Exceptions

None

Notifications

None

Header File

ASCalls.h

Related Methods

ASCStringToFixed

Related Macros

Fixed Numbers
ASFloatToFixed
ASInt16ToFixed
ASInt32ToFixed

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

HFTServer

ASExtensionMgrGetHFT

```
HFT ASExtensionMgrGetHFT (ASAtom name, ASUns32 version);
```

Description

Gets the specified version of the Host Function Table (**HFT**) that has the specified name. If you want to get one of the Acrobat viewer's built-in **HFT**s, use the predefined global variables for the **HFTs** instead of this method.

Parameters

name	The name of the **HFT** to obtain.
version	The version number of the **HFT** to obtain.

Return Value

The specified **HFT**, or **NULL** if the **HFT** does not exist.

Exceptions

None

Notifications

None

Header File

CorCalls.h

Related Methods

HFTReplaceEntry
HFTReplaceEntryEx

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

HFTDestroy

```
void HFTDestroy (HFT hft);
```

Description

Destroys an existing **HFT** by freeing all the **HFT**'s memory. Call this method only if you are absolutely sure that neither your plug-in nor any other plug-in will use the **HFT** again. Because this is usually impossible to know, plug-ins should not destroy **HFT**s. It is even dangerous to destroy an **HFT** at unload time, because the order in which plug-ins are unloaded is not specified.

Parameters

hft	The **HFT** to destroy.

Return Value

None

Exceptions

None

Notifications

None

Header File

ASCalls.h

Related Methods

HFTNew

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

HFTGetReplacedEntry

```
HFTEntry HFTGetReplacedEntry (HFT hft, Selector sel,
HFTEntry replacer);
```

Description

Gets the **HFTEntry** that was replaced by the specified **HFTEntry** in the specified entry. Plug-ins should generally not use this method directly, but use the **CALL_REPLACED_PROC** macro instead.

It is necessary to specify both a selector (the index of an entry in the **HFT**'s table of callback pointers) and an **HFTEntry** (a callback pointer) because a method may be replaced several times, and the various replacement methods are kept in a linked list. The selector determines which linked list is examined, and the **HFTEntry** determines the entry in the linked list to return.

Parameters

hft	The **HFT** in which a replaced entry is retrieved. See **HFTReplaceEntry** for more information.
sel	The selector whose previous value is obtained. See **HFTReplaceEntry** for more information.
replacer	The **HFTEntry** for which the previous value is obtained.

Return Value

The entry present prior to being replaced by **replacer**. Returns **NULL** if the entry has not been replaced.

Exceptions

None

Notifications

None

Header File

ASCalls.h

Related Methods

ASExtensionMgrGetHFT

Related Macros

CALL_REPLACED_PROC

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

HFTIsValid

```
ASBool HFTIsValid (HFT hft);
```

Description

Tests whether an **HFT** is valid.

Parameters

hft	The **HFT** to test.

Return Value

true if **hft** is valid, **false** otherwise.

Exceptions

None

Notifications

None

Header File

ASCalls.h

Related Methods

None

Example

```
result = HFTIsValid(gMyPluginHFT);
```

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

HFTNew

```
HFT HFTNew (HFTServer hftServer, ASInt32 numSelectors);
```

Description

Creates a new **HFT** by calling the specified **HFT** server's **HFTServerProvideHFTProc**.

Parameters

hftServer	The **HFT** server for the **HFT** being created. The **HFT** server must have been created previously using **HFTServerNew**.
numSelectors	The number of entries in the new **HFT**. This determines the number of methods that the **HFT** can contain; each method occupies one entry.

Return Value

The newly-created **HFT**.

Exceptions

None

Notifications

None

Header File

ASCalls.h

Related Methods

ASExtensionMgrGetHFT
HFTDestroy

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

HFTReplaceEntry

```
void HFTReplaceEntry (HFT hft, Selector sel,
HFTEntry newEntry, ASUns32 flags);
```

Description

Replaces the specified entry in the specified **HFT**. This allows a plug-in to override and replace certain methods in Acrobat's API. See **Replaceable Methods** for a list of replaceable methods. This method can be used from anywhere in the plug-in, but it makes the most sense for most plug-ins to replace methods in the **importReplaceAndRegisterCallback** procedure. Plug-ins register their HFTs in the export callback, but the code to populate the function table is only executed when the first client requests the HFT.

Plug-ins can use the **REPLACE** macro instead of calling **HFTReplaceEntry** directly.

All plug-ins, and Acrobat itself, share a single copy of each **HFT**. As a result, when a plug-in replaces the implementation of a method, all other plug-ins and Acrobat also use the new implementation of that method. In addition, once a method's implementation has been replaced, there is no way to remove the new implementation without restarting Acrobat.

NOTE: The **CALL_REPLACED_PROC** macro is available to call the previous HFT entry function that was replaced.

Parameters

hft	The **HFT** in which a method is replaced. Use **ASExtensionMgrGetHFT** to get the **HFT**, given its name. For the **HFT**s built into the Acrobat viewer, global variables containing the **HFT**s have been defined, so you can skip calling **ASExtensionMgrGetHFT** for these **HFT**s. See **HFTs** for a list of these global variables.
sel	The entry in the **HFT** to replace, derived from the method's name by appending **SEL**. For example, to replace **AVAlert**, **sel** must be **AVAlertSEL.**
newEntry	The function to replace the current one. The function pointer must be converted to an **HFTEntry** using the **ASCallbackCreateReplacement** macro.
flags	The new entry's properties. Currently, only **HFTEntryReplaceable** is defined.

Return Value

None

Exceptions

xmErrCannotReplaceSelector

Notifications

None

Header File

ASCalls.h

Related Methods

ASExtensionMgrGetHFT
HFTGetReplacedEntry

Related Macros

CALL_REPLACED_PROC
REPLACE
ASCallbackCreateReplacement

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

HFTReplaceEntryEx

```
void HFTReplaceEntryEx (HFT hft, Selector sel,
HFTEntry newEntry, ASExtension extension, Uns32 flags);
```

Description

New version of **HFTReplaceEntry**. Adds the **extension** argument.

Plug-ins can use the **REPLACE** macro instead of calling **HFTReplaceEntryEx** directly.

NOTE: The **CALL_REPLACED_PROC** macro is available to call the previous HFT entry function that was replaced.

Parameters

hft	The **HFT** in which a method is replaced. Use **ASExtensionMgrGetHFT** to get the **HFT**, given its name. For the **HFT**s built into the Acrobat viewer, global variables containing the **HFT**s have been defined, so you can skip calling **ASExtensionMgrGetHFT** for these **HFT**s. See **HFTs** for a list of these global variables.
sel	The entry in the **HFT** to replace, derived from the method's name by appending **SEL**. For example, to replace **AVAlert**, **sel** must be **AVAlertSEL.**
newEntry	The function to replace the current one. The function pointer must be converted to an **HFTEntry** using the **ASCallbackCreateReplacement** macro.
extension	Plug-ins should pass in **gExtensionID** for this parameter (see the code for the Acrobat 5.0 version of the **REPLACE** macro). This parameter is stored by Acrobat so that any entries that were replaced by a plug-in can be unreplaced in the event that the plug-in unloads.
flags	The new entry's properties. Currently, only **HFTEntryReplaceable** is defined.

Return Value

None

Exceptions

xmErrCannotReplaceSelector

Notifications

None

Header File

ASCalls.h

Related Methods

ASExtensionMgrGetHFT
HFTGetReplacedEntry
HFTReplaceEntry
HFTUnreplaceEntry

Related Macros

CALL_REPLACED_PROC
REPLACE
ASCallbackCreateReplacement

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

HFTServerDestroy

```
void HFTServerDestroy (HFTServer hftServer);
```

Description

Destroys an **HFT** server. Call this method only if the **HFT** will not be used again.

Parameters

hftServer	The **HFT** server to destroy.

Return Value

None

Exceptions

None

Notifications

None

Header File

ASCalls.h

Related Methods

HFTServerNew

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

HFTServerNew

```
HFTServer HFTServerNew (const char* name,
HFTServerProvideHFTProc serverProc,
HFTServerDestroyProc destroyProc, void* clientData);
```

Description

Creates a new Host Function Table (**HFT**) server. An **HFT** server is responsible for creating an instance of an **HFT** with the specified version number, and destroying the **HFT**.

Parameters

name	The new **HFT** server's name.
serverProc	*(Required)* User-supplied callback that provides an **HFT** when given a version number. This procedure is called by **ASExtensionMgrGetHFT** when another plug-in imports the HFT.
destroyProc	*(Optional)* User-supplied callback that destroys the specified **HFT** (generally, this means de-allocating the memory associated with the **HFT**). This procedure is called by **HFTDestroy**.
clientData	Pointer to user-supplied data to pass to the **HFT** server.

Return Value

The newly-created **HFT** server.

Exceptions

None

Notifications

None

Header File

ASCalls.h

Related Methods

HFTServerDestroy
HFTNew

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

HFTUnreplaceEntry

```
void HFTUnreplaceEntry (HFT hft, Selector sel,
HFTEntry oldEntry, ASExtension extension);
```

Description

Removes the **oldEntry** item from **hft** at **sel** if the **extension** fields match. Used, for example, with the DigSig plug-in. DigSig replaces a method that Acrobat could use *after* DigSig unloads. **HFTUnreplaceEntry** allows HFT replacements to be undone in cases like this.

Parameters

hft	The **HFT** in which a method is un-replaced. Use **ASExtensionMgrGetHFT** to get the **HFT**, given its name. For the **HFT**s built into the Acrobat viewer, global variables containing the **HFT**s have been defined, so you can skip calling **ASExtensionMgrGetHFT** for these **HFT**s. See **HFTs** for a list of these global variables.
sel	The entry in the **HFT** to un-replace, derived from the method's name by appending **SEL**. For example, to replace **AVAlert**, **sel** must be **AVAlertSEL.**
oldEntry	The old function to be replaced. The function pointer must be converted to an **HFTEntry** using the **ASCallbackCreateReplacement** macro.
extension	Object of type **ASExtension**.

Return Value

None

Exceptions

None

Notifications

None

Header File

ASCalls.h

Related Methods

ASExtensionMgrGetHFT
HFTGetReplacedEntry
HFTReplaceEntry

HFTReplaceEntryEx

Related Macros

REPLACE
ASCallbackCreateReplacement

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

Memory Allocation

ASfree

```
void ASfree (void* ptr);
```

Description

Frees the specified memory block.

Parameters

ptr	The block of memory to free.

Return Value

None

Exceptions

None

Notifications

None

Header File

ASCalls.h

Related Methods

ASmalloc
ASrealloc

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

ASmalloc

```
void* ASmalloc (os_size_t nBytes);
```

Description

Allocates and returns a pointer to a memory block containing the specified number of bytes.

Parameters

nBytes	The number of bytes for which space is allocated.

Return Value

Pointer to the allocated memory. Returns **NULL** on failure.

Exceptions

None

Notifications

None

Header File

ASCalls.h

Related Methods

ASrealloc
ASfree

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

ASrealloc

```
void* ASrealloc (void* ptr, os_size_t newNBytes);
```

Description

If possible, extends the given block and simply returns **ptr**. Otherwise, allocates a new block of **newNBytes** bytes, copies the contents at the old pointer into the new block, frees the old pointer, and returns the pointer to the new block. If a new block cannot be allocated, the call fails and **ptr** is not freed. Reallocating a block to a smaller size will never fail.

Parameters

ptr	The existing memory block.
newNBytes	The number of bytes the memory block must be able to hold.

Return Value

Pointer to memory block.

Exceptions

None

Notifications

None

Header File

ASCalls.h

Related Methods

ASmalloc
ASfree

Availability

Available if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AV Layer Methods

AV Layer Methods

General

AVAcquireSpecialFilePathName

```
ASInt32 AVAcquireSpecialFilePathName
(AVSpecialCategory category, AVSpecialFolder folder,
const char* file, ASFileSys* fileSys, ASPathName* pathName);
```

Description

Obtains the pathname for a file in a special folder. It is the caller's responsibility to release the **ASPathName**. This method may be used even if the associated file doesn't exist.

Parameters

category	The folder category. See **AVSpecialCategory**. Only certain combinations of **category**/**folder** are allowed—see **AVSpecialError**.
folder	The folder in which the file is located. See **AVSpecialFolder**. Only certain combinations of **category**/**folder** are allowed—see **AVSpecialError**.
file	The name of file (including extension) that you want to access.
fileSys	*(Filled by the method)* The file system through which **pathName** was obtained.
pathName	*(Filled by the method)* **ASPathName** associated with the file.

Return Value

One of the **AVSpecialError** status codes. The **fileSys** and **pathName** variables will only be valid if the method returns **kAVSEOkay** or **kAVSEDoesntExist**. **kAVSEDoesntExist** is returned if the **ASPathName** was created but the associated file doesn't exist.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVAcquireSpecialFolderPathName

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVAcquireSpecialFolderPathName

```
ASInt32 AVAcquireSpecialFolderPathName
(AVSpecialCategory category, AVSpecialFolder folder,
ASBool bCreate, ASFileSys *fileSys, ASPathName *pathName);
```

Description

Obtains the pathname of a special folder. This method cannot be used to obtain the **ASPathName** of a folder that does not exist. It is the caller's responsibility to release the **ASPathName**.

Parameters

category	The folder category. See **AVSpecialCategory**. Only certain combinations of **category**/**folder** are allowed—see **AVSpecialError**.
folder	The folder. See **AVSpecialFolder**. Only certain combinations of **category**/**folder** are allowed—see **AVSpecialError**.
bCreate	Create folder if it doesn't exist.
fileSys	*(Filled by the method)* The file system through which **pathName** was obtained.
pathName	*(Filled by the method)* **ASPathName** associated with the folder.

Return Value

One of the **AVSpecialError** status codes. Returns **kAVSEOkay** if the method executed without error. The **fileSys** and **pathName** variables will only be valid if the method returns **kAVSEOkay**. If **bCreate** is false and the folder does not exist, **kAVSEError** is returned on Windows while **kAVSEDoesntExist** is returned on the Macintosh.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVAcquireSpecialFilePathName

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVDestInfoDestroy

```
void AVDestInfoDestroy (AVDestInfo destInfo);
```

Description

Releases the memory associated with a destination.

Parameters

destInfo	The destination info object to destroy.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVPageViewToDestInfo

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020003** or higher.

AVExtensionAcquireInfo

```
AVExtensionInfo AVExtensionAcquireInfo(ASUns16 index);
```

Description

Fills an **AVExtensionInfoRec** structure with some information about a plug-in. It is the caller's responsibility to release the memory associated with the contents of the returned structure by calling **AVExtensionReleaseInfo**.

Parameters

index	The index of the plug-in to retrieve information for. Valid values for **index** lie between **0** and the value returned by **AVExtensionGetNumPlugIns**.

Return Value

The structure containing information about the plug-in.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVExtensionReleaseInfo

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVExtensionGetNumPlugIns

```
ASUns16 AVExtensionGetNumPlugIns(void);
```

Description

Returns the number of plug-ins loaded by Acrobat.

Parameters

None

Return Value

The number of plug-ins.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVExtensionAcquireInfo
AVExtensionReleaseInfo

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVExtensionReleaseInfo

```
void AVExtensionReleaseInfo(AVExtensionInfo extensionInfo);
```

Description

Releases the memory associated with the contents of **extensionInfo**.

Parameters

extensionInfo	The **AVExtensionInfoRec** structure to release.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVExtensionAcquireInfo

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVIdentityGetText

```
ASText AVIdentityGetText (AVIdentity id, ASText text);
```

Description

Gets the value of a particular aspect of the active user's identity. Valid keys are login name, name, corporation and email.

Parameters

id	The **AVIdentity** key to retrieve.
text	*(Filled by the method)* **ASText** object to hold the text associated with the **id** key.

Return Value

A useful handle to the **text** parameter.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVIdentitySetText

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVIdentitySetText

```
void AVItentitySetText (AVIdentity id, ASText text);
```

Description

Sets the value of a particular aspect of the active user's identity.

For obvious reasons, it is not possible to modify the **kAVILoginName** value through this method.

Parameters

id	The **AVIdentity** key to set.
text	The new value for the key.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVIdentityGetText

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVRectHandleHitTest

```
ASInt16 AVRectHandleHitTest (AVRect* rect, ASBool bMidpoints,
ASInt16 x, ASInt16 y);
```

Description

Tests to see if the given point lies on any of the control handles of **rect**.

Parameters

rect	The rectangle to test.
bMidpoints	Pass **true** if interested in the midpoint handles. If **false** and a midpoint handle is hit, **kAVDragRect** is returned.
x	The x-coordinate of the point.
y	The y-coordinate of the point.

Return Value

If the point is not within the rectangle, **-1** is returned. If the point is within the rectangle, but a not over a handle, **kAVDragRect** is returned. If the point is within a handle region, one of the **AVRectHandleType** constants is returned.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVPageViewSnapRect

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVUtilGetBaseNameAndExtensionByPathName

```
ASBool AVUtilGetBaseNameAndExtensionByPathName
(ASFileSys fileSys, ASPathName pathName, ASInt32 numAddExt,
char** addExt, char** baseName, char** baseExt);
```

Description

Obtains the base filename and extension for a particular file. The function enumerates all registered “convertToPDF” and “convertFromPDF” handlers to find a matching extension for the file passed in. This function allocates memory for the filename and extension. It is the caller’s responsibility to free the memory allocated by the method.

Parameters

fileSys	The file system from which **path** was obtained. Pass **NULL** to use the default file system.
pathName	The path containing the filename.
numAddExt	The number of additional extensions to search through.
addExt	An array of null-terminated strings with extensions to search through.
baseName	*(Allocated and filled by the method)* A buffer containing the filename. Can be **NULL** if you don’t want the base filename.
baseExt	*(Allocated and filled by the method)* A buffer containing the file extension. Can be **NULL** if you don’t want the base file extension.

Return Value

true if the file info was successfully extracted from **path**, **false** otherwise.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

None

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVUtilGetBaseNameAndExtensionByString

```
ASBool AVUtilGetBaseNameAndExtensionByString (char* fileName,
ASInt32 numAddExt, char** addExt, char** baseName,
char** baseExt);
```

Description

Obtains the base filename and extension for a particular file path. The function enumerates all registered “convertToPDF” and “convertFromPDF” handlers to find a matching extension for the file passed in. This function allocates memory for the filename and extension. It is the caller’s responsibility to free the memory allocated by te method.

NOTE: **fileName** is modified by the implementation.

Parameters

fileName	The file path to parse.
numAddExt	The number of additional extensions to search through.
addExt	An array of null-terminated strings with extensions to search through.
baseName	*(Allocated and filled by the method)* A buffer containing the filename. Can be **NULL** if you don't want the base filename.
baseExt	*(Allocated and filled by the method)* A buffer containing the file extension. Can be **NULL** if you don't want the base file extension.

Return Value

true if the file info was successfully extracted from **fileName**, **false** otherwise.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

None

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVActionHandler

AVActionHandlerGetProcs

```
AVActionHandlerProcs AVActionHandlerGetProcs
(AVActionHandler handler);
```

Description

Gets a structure containing pointers to the action handler's procedures.

This method is useful when you want to subclass an already-registered action handler. Acrobat releases the previously-registered action handler when you call **AVAppRegisterActionHandler**, so you must copy the previously-registered action handler to a new action handler structure, which you use in the call to **AVAppRegisterActionHandler.**

Parameters

handler	The action handler whose procedures are obtained.

Return Value

Pointer to a structure that contains the action handler's callbacks.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVAppRegisterActionHandler

Example

```
/* Replace the DoProperties callback of the Thread action handler */
AVActionHandlerProcs actHandler;
AVActionHandlerProcsRec newThreadHandler;
#define Thread_K ASAtomFromString("Thread")

actHandler = AVActionHandlerGetProcs(
AVAppGetActionHandlerByType(Thread_K));
memcpy(&newThreadHandler, (void*)actHandler,
sizeof(AVActionHandlerProcsRec));

/* Set latest size since this can change from once Acrobat version to
another */
newThreadHandler.size = sizeof(AVActionHandlerProcsRec);
newThreadHandler.DoProperties = ASCallbackCreateProto(
     AVActionDoPropertiesProc, &myDoProperties);
AVAppRegisterActionHandler(
     &newThreadHandler, NULL,
(char*)ASAtomGetString(Thread_K), userName);
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVActionHandlerGetType

```
ASAtom AVActionHandlerGetType (AVActionHandler handler);
```

Description

Gets the **ASAtom** specifying what type of actions an action handler services. This is the same as the name used when the action handler was registered using **AVAppRegisterActionHandler**.

Parameters

handler	The action handler whose type is obtained.

Return Value

The **ASAtom** specifying what action types **handler** services.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVAppRegisterActionHandler
AVActionHandlerGetProcs

Example

```
if(AVActionHandlerGetType(myActionHandler)
     == ASAtomFromString("GoToR")){
     /* do something */
}
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVActionHandlerGetUIName

```
const char* AVActionHandlerGetUIName
(AVActionHandler handler);
```

Description

Gets the string that was passed as the user friendly when the action handler was registered using **AVAppRegisterActionHandler.**

Parameters

handler	The action handler whose user interface name is obtained.

Return Value

The user interface name of **handler**.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVAppRegisterActionHandler

Example

```
if (strcmp (AVActionHandlerGetUIName(theHandler), "BalloonAction")){
     /* do something */
}
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVAlert

AVAlert

```
ASInt32 AVAlert (ASInt32 iconType, const char* msg,
const char* button1, const char* button2, const char* button3,
ASBool beep);
```

Description

Displays an alert containing the specified message, icon, and one to three buttons with the specified titles.

You can replace this method with your own version, using **HFTReplaceEntry**.

NOTE: It is a limitation of the current implementation that if the button titles do not match either of the following sets, the size of the dialog is fixed and may not display all of the text in **msg**:

Yes [, No [, Cancel]]
OK [, Cancel]

NOTE: All the implementations of the AVAlert methods call **AVAlert**, which is a replaceable method. If **AVAlert** is replaced, all of the AVAlert methods are also affected.

Parameters

iconType	The icon to display. Must be one of the **AVAlert Icons**. Macintosh users: These constants are defined as per the standard Macintosh user interface guidelines. See
msg	The message to display.
button1, button2, button3	Titles for up to three buttons. Rules: • Use **NULL** to suppress a button's display. • At least **button1** must be non-**NULL**. • **button3** is not displayed if **button2** is **NULL**.
beep	Pass **true** to perform a system beep when the alert is shown.

Return Value

The button number (1, 2, or 3) on which the user clicked.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVAlertGetPref
AVAlertConfirm
AVAlertNote
AVDocAlert

Example

```
ASInt32 choice = AVAlert(ALERT_CAUTION, "Reverting will discard all
changes. Are you sure?", "OK", "Cancel", NULL, false);
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVAlertConfirm

```
ASBool AVAlertConfirm (const char* msg);
```

Description

Displays a dialog box containing the **ALERT_CAUTION** icon, the specified message and **OK** and **Cancel** buttons. The method also performs a system beep. See **AVAlert** for more information.

Parameters

msg	The message to display.

Return Value

Return **true** if the user clicks “OK”, **false** if the user clicks “**Cancel**”.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVAlert
AVAlertNote
AVDocAlertConfirm

Example

```
if(AVAlertConfirm("Are you sure you want to delete all Bookmarks?")){
     PDBookmarkDestroy(PDDocGetBookmarkRoot(pdDoc));
}
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVAlertGetPref

```
ASInt32 AVAlertGetPref (char* name);
```

Description

Retrieves the value stored under **name** in the AVAlert preference store. The AVAlert preference store is intended to be used by plug-ins to store user preferences regarding whether or not an alert is displayed prior to execution of a particular operation. The store is persistent across Acrobat sessions. This routine would typically be used when implementing a dialog that contains a check box saying, “Don’t show me this dialog again.”

Parameters

name	Name of the entry to retrieve. Limited to alphanumeric characters only.

Return Value

The value stored under the **name**, or **0** if the key was not found.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVAlertSetPref
AVAlertResetPrefs

Example

```
ASInt32 nAnswer = AVAlertGetPref("UniqueDialogID");
if (nAnswer != 0) {
  nAnswer = AVAlertWithParams();
  AVAlertSetPref("UniqueDialogID", nAnswer);
 }
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVAlertNote

```
void AVAlertNote (const char* msg);
```

Description

Displays a dialog box containing the **ALERT_NOTE** icon, the specified message and an **OK** button. The method also performs a system beep.

NOTE: The implementation of **AVAlertNote** calls **AVAlert**, which is a replaceable method. If **AVAlert** is replaced, **AVAlertNote** is also affected.

Parameters

msg	The message to display.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVAlert
AVAlertConfirm

Example

```
DURING

HANDLER
     sprintf(buf, "Exception raised: %d, %s",
                  ERRORCODE, ASGetErrorString(ERRORCODE));
     AVAlertNote(buf);
END_HANDLER
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVAlertResetPrefs

```
void AVAlertResetPrefs (void);
```

Description

Resets the entire AVAlert preference store. Specific preference entries can be cleared by passing a value of **0** to **AVAlertSetPref**.

Parameters

None

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVAlertGetPref
AVAlertSetPref

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVAlertSetPref

```
void AVAlertSetPref (char* name, ASInt32 value);
```

Description

Stores a value under **name** in the AVAlert preference store. The AVAlert preference store is intended to be used by plug-ins to store user preferences regarding whether or not an alert is displayed prior to execution of a particular operation. The store is persistent across Acrobat sessions. This routine would typically be used when implementing a dialog that contains a check box saying, “Don’t show me this dialog again.”

Parameters

name	The name of the entry. Limited to alphanumeric characters only.
value	The value to store; pass **0** (zero) to clear this specific entry.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVAlertGetPref
AVAlertResetPrefs

Example

```
ASInt32 nAnswer = AVAlertGetPref("UniqueDialogID");
if (nAnswer != 0) {
  nAnswer = AVAlertWithParams();
  AVAlertSetPref("UniqueDialogID", nAnswer);
 }
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVAlertWithParams

```
ASInt32 AVAlertWithParams (AVAlertParams params);
```

Description

Displays an alert dialog with a feature set as described by the supplied **AVAlertParams**.

Parameters

params	A description of the alert feature set.

Return Value

The button number (**1**,**2**, or **3**) on which the user clicked.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

None

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVAnnotHandler

AVAnnotHandlerDeleteInfo

```
void AVAnnotHandlerDeleteInfo (AVAnnotHandler annotHandler,
AVAnnotHandlerInfo info);
```

Description

Delete the **AVAnnotHandlerInfo** associated with an annotation handler.

Parameters

annotHandler	The annotation handler.
info	The **AVAnnotHandlerInfo** associated with the annotation handler. **info** contains the user interface name of annotation type and the platform-dependent bitmap used as the annotation icon.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVAnnotHandlerGetInfo

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

AVAnnotHandlerGetInfo

```
AVAnnotHandlerInfo AVAnnotHandlerGetInfo
(AVAnnotHandler annotHandler);
```

Description

Gets the information structure associated with an annotation handler.

Parameters

annotHandler	The annotation handler for which the information structure is needed.

Return Value

The information structure associated with **annotHandler**, or **NULL** if the handler does not support this operation.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVAnnotHandlerDeleteInfo

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

AVApp

AVAppBeginFullScreen

```
ASBool AVAppBeginFullScreen (PDColorValue color);
```

Description

Begins full-screen mode. In full-screen mode, all window borders, the menubar, and the toolbar are hidden. All regions of the screen outside of the window boundary are painted with the specified color.

AVAppBeginFullScreen is ignored if the application is already in full-screen mode, or if there are no currently open documents.

Parameters

color	(May be NULL) The color to use for painting all regions of the screen outside of the window boundary. Pass **NULL** to default to the color specified by the application preference **avpFullScreenColor**.

Return Value

true if the application enters full-screen mode, **false** if it is already in full-screen mode or the user selects **Cancel** from the dialog describing how to exit full-screen mode.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVAppEndFullScreen
AVAppDoingFullScreen

Example

```
PDColorValue color;
if(!AVAppDoingFullScreen())
     AVAppBeginFullScreen(color);
else
     AVAppEndFullScreen();
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVAppBeginModal

```
void AVAppBeginModal (AVWindow window);
```

Description

Prepares the Acrobat viewer to display a modal window. For example, disables floating windows in Windows, where they are not automatically disabled. When you are done with the modal window, call **AVAppEndModal**. Calling **AVAppBeginModal** does not make your window modal, it only informs the Acrobat viewer that you intend to display a modal window now.

Windows users: The parent of a modal window must be the application's window. If you display a second modal window from within a modal window, you must *not* call **AVAppBeginModal** a second time. Instead, make the first modal window the parent of the second.

Macintosh users: This method is a no-op.

UNIX users: This method is a no-op.

Parameters

window	The modal window to display.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVAppEndModal
AVAppModalWindowIsOpen
WinAppGetModalParent

Example

```
AVWindow win = AVWindowNew();
if(!AVAppModalWindowIsOpen()){
     AVAppBeginModal(win);/* disable floating windows */
     AVAppShowWindow(win);
     AVAppEndModal(win);
}
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVAppCanQuit

```
ASBool AVAppCanQuit (void);
```

Description

The Acrobat viewer calls this method to obtain permission (programmatically, not using the user interface) when it wants to quit. To use this method, replace it with your own version, using **HFTReplaceEntry**.

If you replace this method in UNIX, your replacement implementation must not have any user interface component (for example, dialog boxes). At the time your replacement is called, the Acrobat viewer owns the pointer and will not give it to your dialog, so the screen will freeze.

Parameters

None

Return Value

Returns **true** if Acrobat can quit, **false** if it may not. The default version of this routine always returns **true**.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

HFTReplaceEntry

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVAppChooseFolderDialog

```
ASBool AVAppChooseFolderDialog
(AVOpenSaveDialogParams dialogParams, ASFileSys* fileSys,
ASPathName *pathName);
```

Description

Displays a platform dependent folder selection dialog. **fileSys** and **pathName** will be **NULL** if the user cancelled the operation.

It is the caller's responsibility to release the returned **ASPathName**.

Parameters

dialogParams	Standard dialog parameters for the **Open/Save/ChooseFolder** dialogs.
fileSys	*(Filled by the method, may be NULL)* The file system through which **pathName** was obtained. May be **NULL** if **kAVOpenSaveAllowForeignFileSystems** is not passed in **dialogParams**.
pathName	*(Filled by the method)* The **ASPathName** associated with the folder chosen by the user.

Return Value

Returns **true** if the user confirmed the selection, **false** if user clicked cancel or some error occurred.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVAppOpenDialog
AVAppSaveDialog

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVAppDidOrWillSwitchForDialog

```
ASBool AVAppDidOrWillSwitchForDialog (void);
```

Description

This call is useful when Acrobat is running embedded in a browser and needs to present a dialog for user input. However, before presenting the dialog, Acrobat needs to pull itself to the front to be the front application. This call enables it to do that.

NOTE: This method is only useful on the Mac.

Parameters

None

Return Value

`true` if Acrobat either is running in the background and will pull itself to the front or has already pulled itself to be the front application; **`false`** otherwise.

Exceptions

None

Notifications

None

Header File

`AVCalls.h`

Related Methods

None

Availability

Available if **`PI_ACROVIEW_VERSION`** (in `PIRequir.h`) is set to **`0x00050000`** or higher.

AVAppDoingFullScreen

```
ASBool AVAppDoingFullScreen (void);
```

Description

Tests whether or not the application is running in full-screen mode.

Parameters

None

Return Value

`true` if application is currently in full-screen mode, **`false`** otherwise.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVAppBeginFullScreen
AVAppEndFullScreen

Example

```
PDColorValue color;
if(!AVAppDoingFullScreen())
     AVAppBeginFullScreen(color);
else
     AVAppEndFullScreen();
```

Availability

Available if **`PI_ACROVIEW_VERSION`** (in PIRequir.h) is set to **`0x00020000`** or higher.

AVAppEndFullScreen

```
void AVAppEndFullScreen (void);
```

Description

Ends full-screen mode. Does nothing if the application is not running in full-screen mode.

Parameters

None

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVAppBeginFullScreen
AVAppDoingFullScreen

Example

```
PDColorValue color;
if(!AVAppDoingFullScreen())
     AVAppBeginFullScreen(color);
else
     AVAppEndFullScreen();
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVAppEndModal

```
void AVAppEndModal (void);
```

Description

Informs the Acrobat viewer that a modal window is no longer being displayed.

Macintosh users: This method is a no-op.

UNIX users: This method is a no-op.

Parameters

None

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVAppBeginModal
AVAppModalWindowIsOpen
WinAppGetModalParent

Example

```
AVWindow win = AVWindowNew();
if(!AVAppModalWindowIsOpen()){
     AVAppBeginModal(win);/* disable floating windows */
     AVAppShowWindow(win);
     AVAppEndModal(win);
}
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVAppEnumActionHandlers

```
void AVAppEnumActionHandlers (AVActionEnumProc enumProc,
void* clientData);
```

Description

Enumerates all registered action handlers, calling the user-supplied procedure for each.

Parameters

enumProc	User-supplied procedure to call once for each action handler.
clientData	Pointer to user-supplied data to pass to **enumProc** each time it is called.

Return Value

None

Exceptions

Raises an exception if and only if **enumProc** raises an exception.

Notifications

None

Header File

AVCalls.h

Related Methods

AVActionHandlerGetProcs
AVAppRegisterActionHandler

Example

```
#define Thread_K ASAtomFromString("Thread")
static ACCB1 ASBool ACCB2
     myActionEnumerator(ASAtom type,
     char* userName, void* clientData)
{
if(type == Thread_K){
     actHandler = AVActionHandlerGetProcs(
     AVAppGetActionHandlerByType(Thread_K));
     origDoProperties =
            actHandler->DoProperties;
     return false;/* leave once we've got what we need */
}
return true;
}

AVAppEnumActionHandlers(
     ASCallbackCreateProto(AVActionEnumProc,
     &myActionEnumerator), NULL);
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVAppEnumAnnotHandlers

```
void AVAppEnumAnnotHandlers (AVAnnotHandlerEnumProc enumProc,
void* clientData);
```

Description

Enumerates all registered annotation handlers, calling the user-supplied procedure for each.

Parameters

enumProc	User-supplied callback to call for each annotation handler.
clientData	Pointer to user-supplied data to pass to **enumProc** each time it is called.

Return Value

None

Exceptions

Raises an exception if and only if **enumProc** raises an exception.

Notifications

None

Header File

AVCalls.h

Related Methods

AVAppGetAnnotHandlerByName
AVAppRegisterAnnotHandler

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVAppEnumDocs

```
void AVAppEnumDocs (AVDocEnumProc enumProc, void* clientData);
```

Description

Enumerates all **AVDoc**s currently open in the viewer, calling the user-supplied procedure for each.

NOTE: Note that **enumProc** must not close any documents.

Parameters

enumProc	User-supplied callback to call once for each open **AVDoc**.
clientData	Pointer to user-supplied data to pass to **enumProc** each time it is called.

Return Value

None

Exceptions

Raises an exception if and only if **enumProc** raises an exception.

Notifications

None

Header File

AVCalls.h

Related Methods

PDEnumDocs

Example

```
ACCB1 ASBool ACCB2 myAppEnumProc(AVDoc doc,
     void* clientData) {
     if (PDDocGetNumPages(AVDocGetPDDoc(doc))
            > 100)
            AVAlertNote("Long document");
     return true;
}
...
AVAppEnumDocs(ASCallbackCreateProto (AVDocEnumProc, &myAppEnumProc),
NULL);
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVAppEnumTools

```
void AVAppEnumTools (AVToolEnumProc enumProc,
void* clientData);
```

Description

Enumerates all registered tools, calling the user-supplied procedure for each.

Parameters

enumProc	User-supplied callback to call for each tool.
clientData	Pointer to user-supplied data to pass to **enumProc** each time it is called.

Return Value

None

Exceptions

Raises an exception if and only if **enumProc** raises an exception.

Notifications

None

Header File

AVCalls.h

Related Methods

AVAppGetToolByName
AVAppRegisterTool

Example

```
ACCB1 ASBool ACCB2 myToolEnumerator(AVTool tool, void* clientData)
{
     return false;
}
AVAppEnumTools(ASCallbackCreateProto(AVToolEnumProc, &myToolEnumerator),
NULL);
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVAppEnumTransHandlers

```
void AVAppEnumTransHandlers (AVTransHandlerEnumProc enumProc,
void* clientData);
```

Description

Enumerates all registered transition handlers, calling the user-supplied procedure for each.

Parameters

enumProc	User-supplied procedure to call once for each transition handler.
clientData	User-supplied data passed to **enumProc** each time it is called.

Return Value

None

Exceptions

Raises an exception if and only if **enumProc** raises an exception.

Notifications

None

Header File

AVCalls.h

Related Methods

AVAppGetTransHandlerByType
AVAppRegisterTransHandler

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020002** or higher.

AVAppFindCommandHandlerByName

```
AVCommandHandler AVAppFindCommandHandlerByName (ASAtom name);
```

Description

Gets the **AVCommandHandler** that was registered under the given name.

Parameters

name	The name of the handler to obtain.

Return Value

The **AVCommandHandler** if it was found, **NULL** otherwise.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVAppRegisterCommandHandler

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVAppFindGlobalCommandByName

```
AVCommand AVAppFindGlobalCommandByName (ASAtom name);
```

Description

Returns the **AVCommand** that was registered under the given name.

Parameters

name	The name of the **AVCommand** to obtain.

Return Value

The **AVCommand** if one was found, **NULL** otherwise.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVAppRegisterGlobalCommand
AVAppUnregisterGlobalCommand

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVAppGetActionHandlerByType

```
AVActionHandler AVAppGetActionHandlerByType (ASAtom type);
```

Description

Gets the action handler that services the specified action type.

Parameters

type	The action type whose handler is obtained.

Return Value

The handler that services actions of the specified type. Returns **NULL** if no such handler is registered.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVAppRegisterActionHandler
AVActionHandlerGetType
AVActionHandlerGetUIName

Example

```
#define Thread_K ASAtomFromString("Thread")
actHandler = AVActionHandlerGetProcs(
     AVAppGetActionHandlerByType(Thread_K));
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVAppGetActiveDoc

```
AVDoc AVAppGetActiveDoc (void);
```

Description

Gets the front-most document window. In UNIX, gets the **AVDoc** being viewed within the window that got the last user event (Key or Button event). This method is often useful for menu or tool enable procs. The front-most document may not be active, for example, the clipboard window may be active and over it.

It is recommended that **AVAppGetActiveDoc** be called only from within menu item or toolbar button callbacks (**AVExecuteProc**, **AVComputeEnabledProc**, and **AVComputeMarkedProc**). For all other callbacks, the **AVDoc** should be derived from the parameters of the callback. For instance, obtain the **AVDoc** from an **AVPageView** parameter with **AVPageViewGetAVDoc**.

This method will only ever return documents that are being viewed within the host application. It will never return a document open in an external window (e.g., a web browser).

Parameters

None

Return Value

The frontmost document window, or **NULL** if no documents are open. **NULL** is also returned when a document is open but its invisible flag is set (see **AVDocOpenParams**) and may be returned while a document is being opened.

Exceptions

None

Notifications

None.

You can get an **AVDoc** as it opens by registering for the **AVDocDidOpen**, **AVDocWillOpenFromFile**, or **AVDocWillOpenFromPDDoc** notifications.

Header File

AVCalls.h

Related Methods

AVAppEnumDocs
AVAppGetNumDocs

Example

```
/* Can be used as menu item enable proc */
static ACCB1 ASBool ACCB2
     DocExistEnable(void* data){
     return (AVAppGetActiveDoc() != NULL);
}
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVAppGetActiveTool

```
AVTool AVAppGetActiveTool (void);
```

Description

Gets the active tool.

Parameters

None

Return Value

The active tool.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVAppSetActiveTool
AVAppGetLastActiveTool
AVAppGetDefaultTool

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVAppGetAnnotHandlerByName

```
AVAnnotHandler AVAppGetAnnotHandlerByName (ASAtom name);
```

Description

Gets the annotation handler that handles the specified annotation type.

Parameters

name	Name of the requested annotation handler.

Return Value

The annotation handler that services annotations of type **name**. Returns **NULL** if no such handler is registered.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVAppEnumAnnotHandlers
AVAppGetAnnotHandlerByName

Example

```
#define Text_K ASAtomFromString("Text")
AVAnnotHandler myAnnotHandler = AVAppGetAnnotHandlerByName(Text_K);
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVAppGetCancelProc

```
CancelProc AVAppGetCancelProc (void** procClientDataP);
```

Description

Gets the default application cancel procedure. The procedure returns true if the users has recently entered the keystroke described below.

A cancel procedure is often passed to methods that take a long time to run. The method will call the procedure at frequent intervals, and if the return value is **true**, the method cancels its operation.

The keystroke that the application recognizes as a cancel command is platform-dependent.

- In Mac OS, an operation is canceled by a Command-period combination.
- In Windows, an operation is canceled by the Escape key.

Parameters

cancelProcClientDataP	*(Allocated and filled by the method)* Data needed by an **CancelProc**. This value must be passed as the **clientData** whenever the procedure is called or passed to a method which may call it.

Return Value

The default **CancelProc**, or **NULL** if one is not available.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

None

Example

```
CancelProc cm;
void* cmData;
cm = AVAppGetCancelProc(&cmData);
PDDocInsertPages(AVDocGetPDDoc(doc), afterPage, pdDoc, 0, PDAllPages,
NULL, pm, pmData,
cm, cmData);
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVAppGetDefaultTool

```
AVTool AVAppGetDefaultTool (void);
```

Description

Gets the default tool. Use this method, together with **AVAppSetActiveTool**, to restore the default tool any time you want. The default tool is the hand tool.

Parameters

None

Return Value

The default tool. Returns **NULL** if there is no default tool.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVAppSetActiveTool
AVAppGetActiveTool
AVAppGetLastActiveTool

Example

```
AVAppSetActiveTool(AVAppGetDefaultTool(), true);
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVAppGetDocProgressMonitor

```
ASProgressMonitor AVAppGetDocProgressMonitor
(void** progMonClientData);
```

Description

Gets the standard application progress monitor, which puts combined status window/progress bar in the message pane of the frontmost document window. This progress monitor can subsequently be passed to any API method requiring a progress monitor.

If you want to display and control a progress monitor in your own plug-in, you can simply invoke the appropriate callbacks in the progress monitor data structure this method returns.

(New in Acrobat 5.0) New **setText** value in **ASProgressMonitor** allows adding text to a monitor.

Parameters

progMonClientData	*(Allocated and filled by the method, may not be **NULL**)* Private data used by the progress monitor. This value must be passed as the **clientData** whenever a callback in the structure is called, or the monitor is passed to a method that takes a progress monitor as a parameter.

Return Value

The standard application progress monitor, or **NULL** if no documents are open.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

None

Example

```
static ProgressMonitor progMon;
static void* monClientData;
     progMon = AVAppGetDocProgressMonitor(&monClientData);
     if (progMon) {
            if (progMon->beginOperation)
                  progMon->beginOperation(monClientData);
            if (progMon->setDuration)
                  progMon->setDuration(len, monClientData);
            if (progMon->setCurrValue)
                  progMon->setCurrValue(0, monClientData);
     }
     /* do long operation */
     for(i=0;i<numBookmarks;i++){
            /* do the work */
            if (progMon->setCurrValue)
            progMon->setCurrValue(i, monClientData);
     }
     if (progMon->beginOperation)
            progMon->beginOperation(monClientData);
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVAppGetLanguage

```
void AVAppGetLanguage (char* buffer);
```

Description

Gets the language in which the application's user interface is running. See the list of **Language Codes** for the possible return values.

Parameters

buffer	*(Filled by the method)* The language code. **buffer** must be able to contain four bytes.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVAppGetVersion

Example

```
char lang[4];
     AVAppGetLanguage(lang);
     if(strcmp("ENU", lang)){
            /* handle non-English language in special way */
     }
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVAppGetLanguageEncoding

```
ASHostEncoding AVAppGetLanguageEncoding (void);
```

Description

Returns the **ASHostEncoding** corresponding to Acrobat's current locale setting. For example, if the user is using the English version of Acrobat on a Japanese system, **AVAppGetLanguageEncoding** will return a Roman encoding but **PDGetHostEncoding** will return a Japanese encoding.

Parameters

None

Return Value

See above.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

None

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVAppGetLastActiveTool

```
AVTool AVAppGetLastActiveTool (void);
```

Description

Gets the tool that was active before the current tool became active.

Parameters

None

Return Value

The last active tool. If only one tool has ever been active, it is returned.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVAppGetActiveTool
AVAppGetDefaultTool

Example

```
if (!toolPersistent)
     AVAppSetActiveTool(
            AVAppGetLastActiveTool(), true);
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVAppGetMenubar

```
AVMenubar AVAppGetMenubar (void);
```

Description

Gets Acrobat's menubar.

Parameters

None

Return Value

The menubar.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVMenuGetParentMenubar

Example

```
AVMenubar bar = AVAppGetMenubar();
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVAppGetName

ASAtom AVAppGetName (void);

Description

Gets the **ASAtom** corresponding to the application's name—that is, the name of the file containing the Acrobat viewer application. The user might have changed this, so don't use it to determine what the application is; use **ASGetConfiguration** instead.

Parameters

None

Return Value

An **ASAtom** representing the Acrobat viewer's name.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

ASGetConfiguration

Example

```
char buf[200];
const char*  appName;
ASAtom appNameAtom;

appNameAtom = AVAppGetName();
if (appNameAtom != ASAtomNull) {
     appName = ASAtomGetString(appNameAtom);
     sprintf(buf,"Application name is %s",
            appName);
     AVAlertNote(buf);
}
else /* This should >never< happen */
     AVAlertNote("Application name NULL!");
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVAppGetNumDocs

```
ASInt32 AVAppGetNumDocs (void);
```

Description

Gets the number of open document views.

Parameters

None

Return Value

The number of open **AVDocs**.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVAppGetActiveDoc

Example

```
/* Might be used as a menu item's enable
     proc */
static ACCB1 ASBool ACCB2 DocExistEnable(void* data)
{
     if (AVAppGetNumDocs() <= 0)
            return false;
     else
            return true;
}
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVAppGetPreference

```
void* AVAppGetPreference (AVPrefsType preference);
```

Description

Gets the value of the specified built-in application preference.

Parameters

preference	The preference value to get. See the preference descriptions in **AVPrefsType**.

Return Value

NULL if preference was not recognized. Otherwise, clients must cast the return value to the appropriate type, depending on the preference requested. See the preference descriptions in **AVPrefsType**.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVAppSetPreference

Example

```
if(AVAppGetPreference(avpSkipWarnings) ||
     AVAlertConfirm("Really?")){
           AVAppSetPreference(avpShowToolBar,
                 (void* )true);
}
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVAppGetReportProc

```
ASReportProc AVAppGetReportProc
(void** asReportProcClientDataP)
```

Description

Retrieves a standard report proc that can be used to report errors and warnings to the user. See **ASReportProc** for more details.

Parameters

asReportProcClientDataP	Pointer to client data passed to the report proc.

Return Value

The report callback.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVCommandGetReportProc

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVAppGetToolBar

```
AVToolBar AVAppGetToolBar (void);
```

Description

Returns Acrobat's Editing toolbar.

NOTE: Developers should use **AVToolBarNew** to create their own toolbars. The Editing toolbar is disabled in external document views (see **Toolbar Names**).

Parameters

None

Return Value

The toolbar.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVAppGetToolBarByName
AVToolBarNew

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVAppGetToolBarByName

```
AVToolBar AVAppGetToolBarByName (const char* name);
```

Description

Returns the toolbar created with the specified name. Refer to **Toolbar Names** for a list of the standard named toolbars.

Acrobat: "File", "Navigation", "ViewHistory", "Viewing", "AdobeOnline", "BasicTools", "Commenting", "Editing", "Collab"

Reader: "File", "Navigation", "ViewHistory", "Viewing", "AdobeOnline", "BasicTools"

NOTE: It is recommended that you position toolbar buttons by finding a related button on the main toolbar (the one returned by **AVAppGetToolBar**) and placing your button next to the existing button. Acrobat will automatically place your toolbutton on the correct named toolbar so it appears next to the existing button.

Parameters

name	The name of the toolbar.

Return Value

The **AVToolBar**, or **NULL** if no **AVToolBar** was found with the specified name.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVAppGetToolBar

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVAppGetToolByName

```
AVTool AVAppGetToolByName (ASAtom name);
```

Description

Returns the **AVTool** that was registered under the specified name.

Parameters

name	The **ASAtom** corresponding to the tool's name. See **Tool Names** for a list of the names of the built-in tools.

Return Value

The tool that was registered under **name**, or **NULL** if no match was found.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVAppGetActiveTool

Example

```
AVTool noteTool = AVAppGetToolByName(
     ASAtomFromString("Note"));
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVAppGetTransHandlerByType

```
AVTransHandler AVAppGetTransHandlerByType (ASAtom name);
```

Description

Gets the transition handler registered for the specified transition type.

Parameters

name	Type of transition handler, which may be one of the types provided in the Acrobat viewer or a new type registered by a plug-in.

Return Value

The transition handler for the type, or **NULL** if no transition handler is registered for that type.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVAppRegisterTransHandler

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020002** or higher.

AVAppGetVersion

```
void AVAppGetVersion (ASInt16* major, ASInt16* minor);
```

Description

Gets the major and minor version numbers of the Acrobat viewer.

To correctly accommodate cases such as 4.05 and 4.5, the minor version is split into two 8 bit numbers e.g.:

4.05 - minor version would be 0x0005

4.5 - minor version would be 0x0500

Parameters

major	*(Filled by the method)* Pointer to the major version number.
minor	*(Filled by the method)* Pointer to the minor version numbers.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVAppGetLanguage

Example

```
ASInt16 major, minor;
AVAppGetVersion(&major, &minor);
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVAppHandlePlatformEvent

```
ASBool AVAppHandlePlatformEvent (void* platformEvent);
```

Description

Handles a platform-specific event.

Parameters

platformEvent	A pointer to a platform-specific event structure.

Return Value

true if the event was handled, **false** otherwise.

Exceptions

May raise exceptions, depending on the event.

Notifications

None

Header File

AVCalls.h

Related Methods

AVAppHandleAppleEvent
AVWindowHandlePlatformEvent

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

AVAppIsIdle

```
ASBool AVAppIsIdle (void);
```

Description

Returns **true** if the application is in a state in which it is safe to destroy a document that uses the multi-read protocol. The multi-read protocol is implemented on some platforms using a "yield" mechanism, which involves a transfer of information between two applications. This function returns **true** if there is no task executing in the application that could invoke such a transfer. Attempting to close a document during such a transfer can cause a deadlock event or a crash.

When a multi-read protocol document is closed, the client must register an **AVAppIdle** task. During its idle proc, it must call **AVAppHandlePlatformEvent**. If the call returns **true**, it is safe to call **AVDocClose**. If it returns **false**, the client must retry at its next idle proc call. **AVAppHandlePlatformEvent** always returns **false** if invoked from an **AVExecuteProc**.

This method does *not* protect against plug-ins that invoke the API outside of **AVAppIdle**, an **AVExecuteProc**, or other explicit API methods. For example, if a Windows plug-in uses a Windows SetTimer event to call an API method, **AVAppHandlePlatformEvent** may erroneously return **true**. Therefore, plug-ins should always use the API methods.

Parameters

None

Return Value

true if it is safe to call **AVDocClose**, **false** otherwise.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVDocClose

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020002** or higher.

AVAppModalWindowIsOpen

```
ASBool AVAppModalWindowIsOpen (void);
```

Description

A plug-in should use this method to determine whether or not a modal window is open. There is a large (and ill-defined) group of actions that are illegal while a modal window is open, although these actions are not programmatically prevented by the Acrobat viewer. While a modal dialog is open, a plug-in must not open documents, change pages, change views, close documents, change tools, or do anything that might disrupt the user or Acrobat viewer.

Parameters

None

Return Value

`true` if a modal window is open, **`false`** otherwise.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVAppBeginModal
AVAppEndModal
WinAppGetModalParent

Example

```
AVWindow win = AVWindowNew();
if(!AVAppModalWindowIsOpen()){
     AVAppBeginModal(win);/* disable floating windows */
     AVAppShowWindow(win);
     AVAppEndModal(win);
}
```

Availability

Available if **`PI_ACROVIEW_VERSION`** (in PIRequir.h) is set to **`0x00020000`** or higher.

AVAppOpenDialog

```
ASBool AVAppOpenDialog (AVOpenSaveDialogParams dialogParams,
ASFileSys* fileSys, ASPathName** pathNames,
ASUns16* numPathNames, ASInt16* chosenFilterIndex);
```

Description

Displays a platform-dependent file open dialog. It is the caller's responsibility to release the returned **ASPathName**s and the associated memory.

Parameters

dialogParams	Standard dialog parameters for **Open**/**Save**/**ChooseFolder** dialogs.
fileSys	*(Filled by the method)* The file system through which the contents of **pathNames** were opened. May be **NULL** if **kAVOpenSaveAllowForeignFileSystems** is not passed in **dialogParams**.
pathNames	*(Allocated and filled by the method)* The **ASPathName**(s) associated with the file(s) selected by the user. The caller must free the list of filled in **ASPathName**s using the supplied **ASFileSys**.
numPathNames	*(Filled by the method, may be **NULL**)* The number of **ASPathName**s in **pathNames** array. May be **NULL** if **kAVOpenSaveAllowMultiple** is not set.
chosenFilterIndex	*(Filled by the method, may be **NULL**)* The index of the filter chosen by the user to select the file(s). May be **NULL** if caller does not care which filter was chosen, **-1** for "All Files".

Return Value

Returns **true** if user clicked confirmed the selection, **false** if user clicked cancel or some error occurred.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVAppChooseFolderDialog

AVAppSaveDialog

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVAppOpenHelpFile

```
ASBool AVAppOpenHelpFile (const char* fileName,
ASBool doSearch);
```

Description

Opens a specified help file. If the help file is not found, optionally opens a dialog box asking if the user wants to search for the help file.

Parameters

fileName	Help filename. This is not a fully-qualified pathname, but the name of an individual help file, such as “AcroHelp.pdf”.
doSearch	If **true** and the help file is not found, displays a dialog box asking if the user wants to search for the help file. If **false**, returns **false** if the help file is not found.

Return Value

true if the help file is found, **false** otherwise.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

None

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

AVAppRegisterActionHandler

```
void AVAppRegisterActionHandler
(AVActionHandlerProcs actionHandler, void* actionHandlerObj,
char* pdfName, char* userName);
```

Description

Registers an action handler within Acrobat.

Parameters

actionHandler	A structure containing the callbacks for the action handler to register. This structure must *not* be freed after calling **AVAppRegisterActionHandler**.
actionHandlerObj	Pointer to user-supplied data to pass to the action handler's methods when they are invoked.
pdfName	The action type serviced by this handler, as it appears in the PDF file. Storage for this string may be released after the call. This string must not contain any white space characters (for example, spaces).
userName	The name of this action type as it should appear in the Acrobat viewer's user interface. Storage for this string may be released after the call.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVActionHandlerGetProcs
AVAppEnumActionHandlers
AVAppGetActionHandlerByType

Example

```
AVActionHandlerProcs actHandler;
char userName[48];

actHandler = ASMalloc(
     sizeof(AVActionHandlerProcsRec));
if(!actHandler) return;
actHandler->size = sizeof(
     AVActionHandlerProcsRec);/* vital for
            future compatibility */
actHandler->Perform =
     ASCallbackCreateProto(
            AVActionPerformProc, &myPerform);
...
AVAppRegisterActionHandler(actHandler,
     NULL, "MultiAction",
     "Multiple Destination Link");
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVAppRegisterAnnotHandler

```
void AVAppRegisterAnnotHandler (AVAnnotHandler handler);
```

Description

Registers a handler for an annotation subtype, replacing any previous handler that had been registered for that subtype. The annotation handler is not registered if its **AVAnnotHandlerGetTypeProc** returns **NULL**.

Parameters

handler	Pointer to a structure containing the annotation handler's callbacks. This structure must *not* be freed after this call, but must be retained.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVAppEnumAnnotHandlers
AVAppGetAnnotHandlerByName
AVPageViewIsAnnotAtPoint

Example

```
static AVAnnotHandlerRec myAH;

memset(&myAH, 0, sizeof(myAH));
myAH.size = sizeof(myAH);/* Vital for
     future compatibility */
myAH.flags = ANNOT_CLIP_TEXT_SELECTION;
myAH.GetType = ASCallbackCreateProto(
     AVAnnotHandlerGetTypeProc, &myGetType);
myAH.Draw = ASCallbackCreateProto(
     AVAnnotHandlerDrawProc, &myDraw);
myAH.GetAnnotViewBBox =
     ASCallbackCreateProto(
           AVAnnotHandlerGetAnnotViewBBoxProc,
           &myGetViewBBox);
myAH.AdjustCursor = ASCallbackCreateProto(
     AVAnnotHandlerAdjustCursorProc,
     &myAdjustCursor);
...
AVAppRegisterAnnotHandler(&myAH);
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to 0x00020000 or higher.

AVAppRegisterCommandHandler

```
void AVAppRegisterCommandHandler (ASAtom name,
AVCommandHandler handler);
```

Description

Registers an **AVCommandHandler** as the implementor of an **AVCommand** with the specified name. If there are any existing commands registered under **name**, the new command replaces them.

A single handler can implement and register multiple commands.

Parameters

name	The command name.
handler	The handler to register.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVAppFindCommandHandlerByName

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVAppRegisterForPageViewAdjustCursor

```
void AVAppRegisterForPageViewAdjustCursor
(AVPageViewCursorProc cursorProc, void* data);
```

Description

Registers a user-supplied procedure to call each time the cursor is adjusted. If more than one procedure is registered, the procedures are called in the order that they were registered.

To un-register, you *must* use the same callback that was used to register; you cannot use a newly-created callback. To accomplish this, call **ASCallbackCreateProto** once before registering and use the value returned from this call both to register and un-register; do not call **ASCallbackCreateProto** a second time when un-registering.

Parameters

cursorProc	User-supplied callback to call each time the cursor is adjusted.
data	Pointer to user-supplied data to pass to **cursorProc** each time it is called.

Return Value

None

Exceptions

genErrNoMemory

Notifications

None

Header File

AVCalls.h

Related Methods

AVAppUnregisterForPageViewAdjustCursor

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVAppRegisterForPageViewClicks

```
void AVAppRegisterForPageViewClicks
(AVPageViewClickProc clickProc, void* data);
```

Description

Registers a user-supplied procedure to call each time a mouse click occurs. This is useful if a plug-in wishes to handle mouse clicks, and the plug-in is better implemented as something other than an annotation or a tool. If more than one routine is registered to receive mouse clicks, the most recently registered routine is called first.

To un-register, you *must* use the same callback that was used to register; you cannot use a newly-created callback. To accomplish this, call **ASCallbackCreateProto** once before registering and use the value returned from this call both to register and un-register; do not call **ASCallbackCreateProto** a second time when un-registering.

Parameters

clickProc	User-supplied callback to call each time a mouse click occurs. If the user-supplied callback returns **true**, it indicates that the procedure handled the mouse click, and it should not be passed along to the Acrobat viewer or other plug-ins that registered to receive mouse clicks. If it returns **false**, the mouse click is passed to the Acrobat viewer or other plug-ins that registered to receive mouse clicks.
data	Pointer to user-supplied data to pass to **clickProc** each time it is called.

Return Value

None

Exceptions

genErrNoMemory

Notifications

None

Header File

AVCalls.h

Related Methods

AVAppUnregisterForPageViewClicks

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVAppRegisterForPageViewDrawing

```
void AVAppRegisterForPageViewDrawing (AVPageViewDrawProc proc,
void* data);
```

Description

Registers a user-supplied procedure to call each time a window is drawn, after the page's contents and annotations have been drawn. This allows plug-ins to draw whatever they wish to on top of pages. If more than one procedure is registered, they are called in a last-in, last-out order. **proc** is called each time the page view changes (scrolls, zooms, goes to a different page).

To un-register, you *must* use the same callback that was used to register; you cannot use a newly-created callback. To accomplish this, call **ASCallbackCreateProto** once before registering and use the value returned from this call both to register and un-register; do not call **ASCallbackCreateProto** a second time when un-registering.

NOTE: As of version 5.0, Acrobat renders PDF pages offscreen before copying them to the display memory. Developers on the Windows platform who call **AVPageViewAcquireMachinePort** on the **AVPageView** passed to the drawing callback should note that the HWND will point to the screen but the HDC will point to an offscreen bitmap. All drawing should be performed using the returned HDC. Developers should create their own HDC based on the returned HWND because their content will be lost when Acrobat copies the offscreen buffer to the display.

Parameters

proc	User-supplied callback to call each time a window is drawn.
data	Pointer to user-supplied data to pass to **proc** each time it is called.

Return Value

None

Exceptions

genErrNoMemory

Notifications

None

Header File

AVCalls.h

Related Methods

AVAppUnregisterForPageViewDrawing

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVAppRegisterForPageViewKeyDown

```
void AVAppRegisterForPageViewKeyDown
(AVPageViewKeyDownProc proc, void* data);
```

Description

Registers a user-supplied procedure to call each time a key is pressed in an **AVPageView**.

To un-register, you *must* use the same callback that was used to register; you cannot use a newly-created callback. To accomplish this, call **ASCallbackCreateProto** once before registering and use the value returned from this call both to register and un-register; do not call **ASCallbackCreateProto** a second time when un-registering.

Parameters

proc	User-supplied callback to call each time a key is pressed.
data	Pointer to user-supplied data to pass to **proc** each time it is called.

Return Value

None

Exceptions

genErrNoMemory

Notifications

None

Header File

AVCalls.h

Related Methods

AVAppUnregisterForPageViewKeyDown

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00040005** or higher.

AVAppRegisterFromPDFHandler

```
void AVAppRegisterFromPDFHandler
(AVConversionFromPDFHandler conversionHandler);
```

Description

Registers an **AVConversionFromPDFHandler** to export from PDF to other file formats. When a “FromPDF” converter is registered, the converter is automatically added to the list of supported file formats in the **SaveAs** dialog. In addition, the converter is displayed in the list of “FromPDF” converters for Batch framework.

The handler is only required to implement the **convert** callback. All others are optional. If a handler fails to implement the **convert** callback, the handler will not be registered.

Parameters‘

conversionHandler	The handler.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVAppRegisterToPDFHandler

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVAppRegisterGlobalCommand

```
void AVAppRegisterGlobalCommand (AVCommand cmd);
```

Description

Registers an **AVCommand** in the global command list. The application assumes ownership of the resources associated with **cmd**. As such, the client must not call **AVCommandDestroy**.

Parameters

cmd	The **AVCommand** to register.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVAppFindGlobalCommandByName
AVAppUnregisterGlobalCommand

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVAppRegisterIdleProc

```
void AVAppRegisterIdleProc (AVIdleProc idleProc,
void* clientData, ASUns32 period);
```

Description

Registers a user-supplied procedure to call “regularly” when the Acrobat viewer is otherwise idle. If more than one idle procedure is registered, they are all called in a round robin order. The registered idle procs may be called when the Acrobat viewer is not the frontmost application. In addition, in Mac OS, the registered idle procs receive idle events any time a movable modal dialog or modal **AVWindow** is displayed, but not a system-modal one. Use **AVAppModalWindowIsOpen** if you wish to determine whether or not a modal window is open.

To un-register, you *must* use the same callback that was used to register; you cannot use a newly-created callback. To accomplish this, call **ASCallbackCreateProto** once before registering and use the value returned from this call both to register and un-register; do not call **ASCallbackCreateProto** a second time when un-registering.

Parameters

idleProc	User-supplied callback to call at idle time.
clientData	Pointer to user-supplied data to pass to **idleProc** each time it is called.
period	Minimum time between calls to **idleProc**. **idleProc** will not be called any more frequently than **period**, but it may be called less frequently. **period** is specified in ticks (one tick is 1/60 of a second).

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVAppUnregisterIdleProc
AVAppModalWindowIsOpen

Example

```
ACCB1 void ACCB2 myIdleProc(void* data)
{
     /* do some stuff */
}
AVAppRegisterIdleProc(
     ASCallbackCreateProto(AVIdleProc,
     &myIdleProc), NULL, 15);
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVAppRegisterNotification

```
void AVAppRegisterNotification (NSelector nsel,
ASExtension owner, void* proc, void* clientData);
```

Description

Registers a user-supplied procedure to call when the specified event occurs.

Many notifications appear in **Will**/**Did** pairs, for example **AVDocWillPerformAction** and **AVDocDidPerformAction**. It is possible that an operation may fail after the **Will** notification and before the **Did** notification. When this occurs, the **Did** notification is still broadcast, but the **err** parameter in the **Did** notification is nonzero, and represents the error that occurred. When **err** is nonzero, the other parameters are not necessarily valid. Always check **err** in a **Did** notification before using the other parameters.

When calling **AVAppUnregisterNotification** to un-register for a notification, you *must* pass the **proc**, **clientData**, and **owner** that were used when the notification was registered using **AVAppRegisterNotification**. You *must* use the *same* callback that was used to register; you cannot use a newly-created callback. To accomplish this, call **ASCallbackCreateNotification** once before registering, and use the value returned from this call both to register and un-register; do not call **ASCallbackCreateNotification** a second time when un-registering. You will then need to destroy the pointer to the callback using the **ASCallbackDestroy** method.

Parameters

nsel	The notification type. Must be one of the notification selectors (see **Notifications**). The notification selector is the name of the notification with the characters **NSEL** appended. For example, the selector for **AVDocDidOpen** is **AVDocDidOpenNSEL**.
owner	The **gExtensionID** of the plug-in registering the notification.
proc	User-supplied callback to call when the notification occurs. Its declaration depends on the notification type (see **Notifications**). Remember to use **ASCallbackCreateNotification** to convert **proc** to a callback before passing it to **AVAppRegisterNotification**.
clientData	Pointer to user-supplied data to pass to **proc** each time it is called.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVAppUnregisterNotification
ASCallbackCreateNotification
ASCallbackDestroy

Example

```
ASCallback myCallback;

myCallback = ASCallbackCreateNotification(
     AVDocDidOpen, &CalcAVDocDidOpen);
AVAppRegisterNotification(AVDocDidOpenNSEL,
     gExtensionID, myCallback, NULL);
...
/* Unregister for the notication */
AVAppUnregisterNotification(
     AVDocDidOpenNSEL, gExtensionID,
     myCallback, NULL);

/* Destroy Pointer*/
ASCallbackDestroy(myCallback);
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVAppRegisterTool

```
void AVAppRegisterTool (AVTool tool);
```

Description

Registers the specified tool with the Acrobat viewer. The tool is not registered if its **GetTypeProcType** callback returns **NULL**.

Parameters

tool	Structure containing the tool's callbacks. This structure must *not* be freed after calling **AVAppRegisterTool**, but must be retained.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVAppEnumTools
AVAppSetActiveTool

Example

```
static AVToolRec myTool;
{
     memset(&myTool, 0, sizeof(AVToolRec));
     myTool.size = sizeof(AVToolRec);

     myTool.Activate = ASCallbackCreateProto(
           ActivateProcType, &myToolActivate);
     myTool.GetType = ASCallbackCreateProto(
           GetTypeProcType, &myToolGetType);
     myTool.AdjustCursor =
           ASCallbackCreateProto(
           AdjustCursorProcType,
           &myToolAdjustCursor);
     myTool.DoClick = ASCallbackCreateProto(
           DoClickProcType, &myToolDoClick);
     myTool.ComputeEnabled =
           myToolIsEnabledCallback;/* already
                 callbackCreated */
     myTool.computeEnabledData = NULL;

     AVAppRegisterTool(&myTool);
}
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to 0x00020000 or higher.

AVAppRegisterToolBarPosition

```
void AVAppRegisterToolBarPosition (const char* name,
ASBool external, AVToolBarPosition position);
```

Description

Sets the position of the toolbar. A toolbar can have separate positional attributes for internal and external views. The position is set when the user first opens Acrobat; after that, the user's preferences dictate where the toolbar is located.

Parameters

name	The name of the toolbar. Refer to **Toolbar Names** for a list of the standard named toolbars.
external	If **true**, the preferences are associated with the external view.
position	The structure defining the toolbar's attributes.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVToolBarNew

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVAppRegisterToPDFHandler

```
void AVAppRegisterToPDFHandler
(AVConversionToPDFHandler conversionHandler);
```

Description

Registers an **AVConversionToPDFHandler** to import other file formats. When a "ToPDF" converter is registered, the converter is automatically added to the list of supported file formats in the **Open** dialog. In addition, the converter is displayed in the list of "ToPDF" converters for Batch framework.

Parameters

conversionHandler	The handler.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVAppRegisterFromPDFHandler

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVAppRegisterTransHandler

```
void AVAppRegisterTransHandler (AVTransHandler avth);
```

Description

Registers a transition handler within Acrobat. If **avth** has not implemented the **GetType** callback, it will not be registered.

Parameters

avth	An **AVTransHandler** structure containing pointers to the transition handler's functions. This structure must *not* be freed after calling **AVAppRegisterTransHandler**.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVAppEnumTransHandlers
AVAppGetTransHandlerByType

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020002** or higher.

AVAppSaveDialog

```
ASBool AVAppSaveDialog (AVOpenSaveDialogParams dialogParams,
ASFileSys* fileSys, ASPathName* pathName,
ASUns16* chosenFilterIndex);
```

Description

Displays a platform-dependent file save dialog. It is the caller's responsibility to release the returned **ASPathName**.

Parameters

dialogParams	Standard dialog parameters for **Open**/**Save**/**ChooseFolder** dialogs.
fileSys	*(Filled by the method, may be **NULL**)* The file system through which **pathName** was obtained. May be **NULL** if **kAVOpenSaveAllowForeignFileSystems** is not passed in **dialogParams**.
pathName	*(Filled by the method)* The **ASPathName** associated with the file selected by the user. The caller must free the filled in **ASPathName** using the supplied **ASFileSys**.
chosenFilterIndex	*(Filled by the method, may be **NULL**)* The index of the filter chosen by the user to select the file. May be **NULL** if caller does not care which filter was chosen, **-1** for "All Files".

Return Value

Returns **true** if user confirmed the selection, **false** if user clicked cancel or some error occurred.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

None

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVAppSetActiveTool

```
void AVAppSetActiveTool (AVTool tool, ASBool persistent);
```

Description

Sets the active tool. Does nothing if the specified tool is not currently enabled. Whether a tool is enabled or not is determined by the **AVComputeEnabledProc** callback in the **AVTool** structure. If this callback is **NULL**, the tool is always enabled.

Parameters

tool	The tool to set as the active tool.
persistent	A flag that indicates a preference as to whether or not the tool stays active after it is used. **true** is a hint that the tool should, if possible, stay active for an arbitrary number of ”operations” (whatever that happens to be) rather than doing a “one shot” operation and restoring the prior active tool. Persistence is not enforced by the Acrobat viewer. It is up to a one-shot tool to restore the previously active tool (determined using **AVAppGetLastActiveTool**), or to restore the default tool (determined using **AVAppGetDefaultTool**) if there was no previously active tool.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVAppGetActiveTool
AVAppGetLastActiveTool
AVAppGetDefaultTool

Example

```
if (!toolPersistent)
     AVAppSetActiveTool(
           AVAppGetLastActiveTool(), true);
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVAppSetPreference

```
void AVAppSetPreference (AVPrefsType preference, void* value);
```

Description

Sets the value of the specified built-in application preference. The preference values are automatically saved to disk when a new value is set.

Parameters

preference	The preference value to set. See **AVPrefsType** for a list of preference descriptions.
value	The new value for **preference**. The type of this value is dependent on the preference being set. See **AVPrefsType** for more information.

Return Value

None

Exceptions

None

Notifications

AVAppOldPrefDidChange

Header File

AVCalls.h

Related Methods

AVAppGetPreference

Example

```
if(AVAppGetPreference(avpSkipWarnings) ||
     AVAlertConfirm("Really?")){
           AVAppSetPreference(avpShowToolBar,
                 (void *)true);
}
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVAppUnregisterForPageViewAdjustCursor

```
void AVAppUnregisterForPageViewAdjustCursor
(AVPageViewCursorProc cursorProc);
```

Description

Un-registers a user-supplied adjust cursor procedure.

To un-register, you *must* use the same callback that was used to register; you cannot use a newly-created callback. To accomplish this, call **ASCallbackCreateProto** once before registering and use the value returned from this call both to register and un-register; do not call **ASCallbackCreateProto** a second time when un-registering.

Parameters

cursorProc	The original callback.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVAppRegisterForPageViewAdjustCursor

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVAppUnregisterForPageViewClicks

```
void AVAppUnregisterForPageViewClicks
(AVPageViewClickProc clickProc);
```

Description

Un-registers a user-supplied page view click procedure.

To un-register, you *must* use the same callback that was used to register; you cannot use a newly-created callback. To accomplish this, call **ASCallbackCreateProto** once before registering and use the value returned from this call both to register and un-register; do not call **ASCallbackCreateProto** a second time when un-registering.

Parameters

clickProc	The original callback.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVAppRegisterForPageViewClicks

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVAppUnregisterForPageViewDrawing

```
void AVAppUnregisterForPageViewDrawing
(AVPageViewDrawProc proc);
```

Description

Un-registers a user-supplied page view drawing procedure.

To un register, you *must* use the same callback that was used to register; you cannot use a newly-created callback. To accomplish this, call **ASCallbackCreateProto** once before registering and use the value returned from this call both to register and un-register; do not call **ASCallbackCreateProto** a second time when un-registering.

Parameters

proc	The original callback.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVAppRegisterForPageViewDrawing

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVAppUnregisterForPageViewKeyDown

```
void AVAppUnregisterForPageViewKeyDown
(AVPageViewKeyDownProc proc);
```

Description

Un-registers a user-supplied page view key down procedure.

To un-register, you *must* use the same callback that was used to register; you cannot use a newly-created callback. To accomplish this, call **ASCallbackCreateProto** once before registering and use the value returned from this call both to register and un-register; do not call **ASCallbackCreateProto** a second time when un-registering.

Parameters

proc	The original callback.

Return Value

None

Exceptions

genErrNoMemory

Notifications

None

Header File

AVCalls.h

Related Methods

AVAppRegisterForPageViewKeyDown

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00040005** or higher.

AVAppUnregisterGlobalCommand

```
void AVAppUnregisterGlobalCommand (AVCommand cmd);
```

Description

Removes an **AVCommand** from the global command list.

Parameters

cmd	The command.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVAppFindGlobalCommandByName
AVAppRegisterGlobalCommand

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVAppUnregisterIdleProc

```
void AVAppUnregisterIdleProc (AVIdleProc idleProc,
void* clientData);
```

Description

Un-registers a user-supplied idle procedure.

To un-register, you *must* use the same callback that was used to register; you cannot use a newly-created callback. To accomplish this, call **ASCallbackCreateProto** once before registering and use the value returned from this call both to register and un-register; do not call **ASCallbackCreateProto** a second time when un-registering.

Parameters

idleProc	The original callback.
clientData	The original clientData.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVAppRegisterIdleProc

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVAppUnregisterNotification

```
void AVAppUnregisterNotification (NSelector nsel,
ASExtension owner, void* proc, void* clientData);
```

Description

Un-registers a user-supplied notification procedure.

To un-register, you *must* use same callback, **clientData**, and **owner** that were used when the notification was registered using **AVAppRegisterNotification**. To accomplish this, call **ASCallbackCreateNotification** once before registering and use the value returned from this call both to register and un-register; do not call **ASCallbackCreateNotification** a second time when un-registering.

Parameters

nsel	The notification type.
owner	The **gExtensionID** of the plug-in registering the notification.
proc	The original callback.
clientData	The original **clientData**.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVAppRegisterNotification

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVAppYieldToOtherApps

```
void AVAppYieldToOtherApps (double yieldTimeout);
```

Description

Yield to other applications for **yieldTimeout**.

NOTE: Macintosh platform plug-ins will need to call **AVAppYieldToOtherApps** instead of **WaitNextEvent** to prevent problems with Carbon event handling. **AVAppYieldToOtherApps** calls **ReceiveNextEvent**. It is recommended, that you use the **kEventDurationForever** constant as the argument to **AVAppYieldToOtherApps**, though this will impact portability since it is a CodeWarrior define (in CarbonEvents.h).

Parameters

yieldTimeout	The minimum amount of time to yield in seconds. Only applicable for MacOS 8.6 and 9.x. A no-op for Windows and UNIX.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

None

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVHasAuxDataHandler

```
ASBool AVHasAuxDataHandler (ASAtom dataType);
```

Description

Indicates whether a handler exists for the specified data type.

Parameters

dataType	Name of data handler being queried.

Return Value

true if a handler is registered, **false** if a handler is not registered.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVDocSendAuxData
AVRegisterAuxDataHandler
AVUnregisterAuxDataHandler

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020002** or higher.

AVRegisterAuxDataHandler

```
ASBool AVRegisterAuxDataHandler (ASExtension extension,
ASAtom auxDataType, AVAuxDataHandler  handler);
```

Description

Registers an **AuxDataHandler**.

A handler can be registered for more than one kind of auxiliary data. The type of data is passed to the **AuxDataHandler** at **Perform** time so that it can distinguish what type of data it is receiving.

Parameters

extension	The **gExtensionID** of the plug-in registering the handler.
auxDataType	The **ASAtom** for the type of data that the handler accepts.
handler	The handler to register.

Return Value

true if the handler was registered, **false** if the handler could not be un-registered. For example, if another handler is already registered for this time.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVDocSendAuxData
AVHasAuxDataHandler
AVUnregisterAuxDataHandler

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020002** or higher.

AVUnregisterAuxDataHandler

```
ASBool AVUnregisterAuxDataHandler (ASExtension extension,
ASAtom auxDataType, AVAuxDataHandler handler);
```

Description

Un-registers a previously registered **AuxDataHandler**.

Parameters

extension	The **gExtensionID** of the plug-in un-registering the handler.
auxDataType	Type of data for the handler being un-registered.
handler	The handler to un-register.

Return Value

true if the handler was un-registered, **false** if the handler could not be un-registered. For example, returns **false** if the handler was never registered.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVHasAuxDataHandler
AVRegisterAuxDataHandler

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020002** or higher.

AVCommand

AVCommandCancel

```
AVCommandStatus AVCommandCancel (AVCommand cmd);
```

Description

Cancels the specified command. If the command is currently processing a file, the command might not attempt to roll back any modifications it has made to the document. This may leave the PDF in an invalid state.

Parameters

cmd	The command to cancel.

Return Value

The current status of **cmd**. Should be **kAVCommandCanceled**.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVCommandReset
AVCommandWork

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVCommandDestroy

```
void AVCommandDestroy (AVCommand cmd);
```

Description

Destroys the specified command and its associated resources.

Parameters

cmd	The command to destroy.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVCommandNew

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVCommandExecute

```
AVCommandStatus AVCommandExecute (AVCommand cmd);
```

Description

This method runs the specified **AVCommand** using the following process:

- Reset the command if its status is not **AVCommandReady**
- If only a **PDDoc** input has been configured, **AVCommandExecute** does nothing to the inputs. If no **AVDoc** or **PDDoc** inputs have been configured, **AVCommandExecute** configures the command to use the active **AVDoc**. In all cases, if an **AVDoc** has been configured (either by **AVCommandExecute** or its caller) the implementation ensures that the **PDDoc** input matches the **AVDoc** input.
- If the command can display a dialog (i.e., if the command handler has a "ShowDialog" callback and the command's **kAVCommandKeyCanShowDialog** property is **true**), present the dialog to allow the user to alter the command's parameters.
- Repeatedly call **AVCommandWork** on **cmd** until that method returns a status other than **kAVCommandWorking**.

This method should be used when the client does not need the level of control provided when calling **AVCommandWork** directly. Specifically, this method is useful for using a global command from within a menu or toolbar button's execution procedure.

Parameters

cmd	The command to execute.

Return Value

The current status of **cmd**.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVCommandWork

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVCommandGetAVDoc

```
AVDoc AVCommandGetAVDoc (AVCommand cmd);
```

Description

Retrieves the **AVDoc** from a command's inputs **ASCab**.

NOTE: In some cases, this call returns a **NULL AVDoc** even when **AVCommandGetPDDoc** returns a non-**NULL PDDoc** and an **AVDoc** is open on that **PDDoc**. In these cases, you should probably ignore the **AVDoc** or use **AVDocFromPDDoc** to find the associated **AVDoc**.

Parameters

cmd	The command to be queried.

Return Value

The **AVDoc** if it was found, **NULL** otherwise.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVCommandSetInputs

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVCommandGetCab

```
ASCab AVCommandGetCab (AVCommand cmd, const char* key,
ASBool create);
```

Description

Returns the **ASCab** stored in the specified command under **key**. If the cabinet isn't available, this method will create it if **create** is set to **true**. This method can only be exercised by an **AVCommand** handler. Command handlers can use this call to attach arbitrary information to a command. Only the command handler should access these cabinets.

NOTE: The command retains ownership of the returned cabinet.

Parameters

cmd	The command to be queried.
key	The key that the cabinet is stored under.
create	Pass **true** to have this method create the cabinet if it does not exist.

Return Value

The cabinet if it was found/created, **NULL** otherwise.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVCommandPutCab

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVCommandGetCancelProc

```
ASCancelProc AVCommandGetCancelProc (AVCommand cmd);
```

Description

Returns a cancellation procedure for the command. If the user interface policy is anything other than **kAVCommandUIInteractive**, this cancellation procedure must be used. If the UI policy is **kAVCommandUIInteractive**, an appropriate default cancel proc will be provided but the command may use a more appropriate one it if wishes. Pass in the command itself as the client data.

Parameters

cmd	The command whose cancelation procedure is returned.

Return Value

The cancelation procedure.

Header File

AVCalls.h

Related Callbacks

None

Related Methods

None

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVCommandGetConfig

```
void AVCommandGetConfig (AVCommand cmd, ASCab config)
```

Description

Retrieves the configuration parameters for the specified command.

Configuration values are controlled by the mechanism that is driving the command—i.e., a plug-in client or the batch framework. For example, one configuration value is whether or not to display a dialog while executing; a setting that the user can toggle through the UI, or a plug-in client can set through **AVCommandSetConfig**.

To retrieve all the configuration parameters, pass in an empty cabinet for **config** and the method will fill in the cabinet with the current configuration keys/values. To retrieve specific configuration parameter values, fill the initial dictionary with the keys you're interested in, each with a **NULL** value, and the method will attempt to fill in the appropriate value for each key.

Currently the only configuration parameters defined are:

- UIPolicy (**kASValueInteger**)—The local UI policy for this command.
- ParamsDescOpen (**kASValueBool**)—Indicates whether or not the description of this command's parameters is visible in the sequence view.

NOTE: The caller retains ownership of **config**.

NOTE: Normally the batch sequence framework controls the configuration of commands in batch sequences.

Parameters

cmd	The command whose configuration parameters are being retrieved.
config	*(Filled by the method)* An **ASCab** into which the parameters are written.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVCommandSetConfig
AVCommandGetUIPolicy

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVCommandGetInputs

```
void AVCommandGetInputs (AVCommand cmd, ASCab inputs);
```

Description

Retrieves the input parameters of the specified command. The inputs of a command consist of an **ASCab** detailing properties of the object the command will operate on. The contents of the cabinet are dependent on the mechanism through which the command is being initialized. The batch framework will attempt to provide the following:

Key (see AVExpt.h)	Stored As	Description
kAVCommandKeyPDDoc	**kASValuePointer**	The document being processed.
kAVCommandKeyBaseFileName	**kASValueString**	The name of the input file, without extension.
kAVCommandKeyOrigExtension	**kASValueString**	The extension of the input file.

Plug-in clients should also attempt to provide this information.

The content of the inputs cabinet is not limited to the keys listed above. Clients (or the command handler itself) can specify additional inputs as necessary.

NOTE: The caller retains ownership of **inputs**.

NOTE: **AVCommandExecute** will also attempt to provide **kAVCommandKeyAVDoc**, a pointer to the **AVDoc** being operated on.

NOTE: You can use **AVCommandGetPDDoc** and **AVCommandGetAVDoc** to quickly retrieve the **PDDoc** or **AVDoc** in a command's inputs.

Parameters

cmd	The command whose input parameters are being retrieved.
inputs	*(Filled by the method)* The input parameters.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVCommandSetInputs

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVCommandGetName

```
ASAtom AVCommandGetName (AVCommand cmd);
```

Description

Returns the name of the command.

Parameters

cmd	The command whose name is returned.

Return Value

The command name.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

None

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVCommandGetParams

```
void AVCommandGetParams (AVCommand cmd, ASCab params);
```

Description

Retrieves the parameter set for the specified command. It is possible that some commands have no parameters that can be configured, in which case no data will be written to **params**. The **params** cabinet should be empty when passed in. Upon return it will be filled with copies of all of the command's parameter settings.

NOTE: The caller retains ownership of **params**.

Parameters

cmd	The command whose parameters are being retrieved.
params	*(Filled by the method)* An **ASCab** into which the parameter set is written.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVCommandSetParams

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVCommandGetPDDoc

```
PDDoc AVCommandGetPDDoc (AVCommand cmd);
```

Description

Retrieves the **PDDoc** from a command's inputs **ASCab**.

Parameters

cmd	The command to be queried.

Return Value

A **PDDoc** if it was found, **NULL** otherwise.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

None

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVCommandGetProgressMonitor

```
ASProgressMonitor AVCommandGetProgressMonitor (AVCommand cmd);
```

Description

Returns a progress monitor the command can use to report progress. The command itself should be passed in as the **clientData** associated with the monitor's callbacks.

Command handlers should use this progress monitor rather than a custom implementation.

If the command is being driven by the batch framework, the progress monitor updates the batch progress dialog. If the command is being driven by a plug-in *and* the **AVDoc** input key has been set, the progress monitor updates the progress pane at the bottom of the document's window, otherwise the progress monitor's callbacks are no-ops.

Parameters

cmd	The command to be queried.

Return Value

The command progress monitor.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

None

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVCommandGetProps

```
void AVCommandGetProps (AVCommand cmd, ASCab props);
```

Description

Retrieves the properties of the specified command. Properties are values intrinsic to the command or to the command's current state.

To retrieve properties, create a cabinet containing the keys for the properties you're interested in (the values should be invalid, such as **NULL**s), and pass it into this method. The command will copy the requested properties into your cabinet. If the cabinet is empty, the command will fill in all properties.

The following properties are pre-defined:

- CanShowDialog (**kASValueBool**) - Indicates that the command can show a configuration dialog. Support of this property is optional—defaults to **false**.
- CanDescribeParams (**kASValueBool**) - Indicates that the command can provide a description of its parameters. Support of this property is optional—defaults to **false**. If the command sets this property to **true**, it should support the ParamDesc property also.
- ParamsDesc (**kASValueCabinet**) - A cabinet containing numeric keys—i.e., "1", "2", ..., "n" with **kASValueText** values describing the command's parameters. The text items will be displayed in the sequence dialog in the numerical order of the keys.
- CanBatch (**kASValueBool**) - Indicates that the command should appear in the list of commands that can be batched. Support of this property is optional—defaults to **false**. If the command set returns this property value as **true**, it MUST support the GenericTitle and GroupTitle properties also.
- GroupTitle (**kASValueText**) - Name of the group to which this command belongs. Currently the GroupTitles are localized strings, so vary from one language to another. The English GroupTitles are those listed in the edit sequence dialog: "Comments," "Document," "JavaScript," "Page," and "PDF Consultant."
- GenericTitle (**kASValueText**) - Generic name for this command, for example, "Show/Hide Bookmarks", "Rotate Pages", and so forth. This is used when displaying the command in the list of global commands.
- Title (**kASValueText**) - Specific title for this command, for example, "Hide Bookmarks" taking the command's parameters into account. This is used for displaying a specific command within a sequence.

NOTE: The caller retains ownership of **props**.

Parameters

cmd	The command whose properties are being retrieved.
props	*(Filled by the method)* The command properties.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

None

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVCommandGetReportProc

```
ASReportProc AVCommandGetReportProc (AVCommand cmd);
```

Description

Returns the **ASReportProc** associated with the specified command. **AVCommandHandlers** should report all error and status messages through this procedure.

Pass the **AVCommand** itself as the **clientData** parameter when calling the procedure.

Parameters

cmd	The command whose **ASReportProc** is being returned.

Return Value

The **ASReportProc**.

Header File

AVCalls.h

Related Callbacks

None

Related Methods

None

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVCommandGetStatus

```
AVCommandStatus AVCommandGetStatus (AVCommand cmd);
```

Description

Returns the current status of the specified command.

Parameters

cmd	The command whose status is returned.

Return Value

The current status of **cmd**.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

None

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVCommandGetUIPolicy

```
AVCommandUIPolicy AVCommandGetUIPolicy (AVCommand cmd);
```

Description

Retrieves the user interface policy that the command will respect while it is being executed. The UI policy is determined by a combination of the command's configuration and the context in which the command is executing (e.g., a batch sequence).

Parameters

cmd	The command whose UI policy is returned.

Return Value

The user interface policy.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVCommandGetCancelProc
AVCommandSetConfig

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVCommandNew

```
AVCommand AVCommandNew (ASAtom name);
```

Description

Creates a new command of the specified type. An **AVCommandHandler** for that command type must have already been registered.

Parameters

name	The new command's type name.

Return Value

The new command or **NULL** if the specified type has not been registered.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVCommandDestroy

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVCommandPutCab

```
void AVCommandPutCab (AVCommand cmd, const char* key,
ASCab cabVal);
```

Description

Stores a cabinet in the specified command. If a cabinet is currently stored under **key**, it is overwritten. This method can only be exercised by an **AVCommand** handler.

AVCommandHandlers can use this call to store state information (such as parameters) in a command. Only the command handler associated with the command should access these cabinets.

NOTE: The command assumes ownership of **cabVal**.

Parameters

cmd	The command.
key	*(May be **NULL**)* The key name that the cabinet will be stored under. If **NULL**, a numerical name is generated and used.
cabVal	*(May be **NULL**)* The cabinet to store. If **NULL**, the method destroys the cabinet currently stored under **key** (if any).

Return Value

None

Exceptions

genErrBadParm

Notifications

None

Header File

AVCalls.h

Related Methods

AVCommandGetCab

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVCommandReset

```
AVCommandStatus AVCommandReset (AVCommand cmd);
```

Description

Resets the specified command. The command is expected to clean up its current state and assume a ready state.

If the command is currently processing a file, the command might not attempt to roll back any modifications it has made to the PDF. This may leave the PDF in an invalid state.

Parameters

cmd	The command to reset.

Return Value

The current status of **cmd**.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVCommandCancel
AVCommandWork

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVCommandSetConfig

```
AVCommandStatus AVCommandSetConfig (AVCommand cmd,
ASCab config);
```

Description

Sets the configuration for the specified command. See **AVCommandGetConfig** for more information.

config will be merged with the current configuration cabinet to generate the new configuraton. To erase configuration settings, set their values to **NULL** in your cabinet.

Currently the only configuration parameters defined are:

- UIPolicy (**kASValueInteger**) - The local UI policy for this command.
- ParamsDescOpen (**kASValueBool**) - Indicates whether or not the description of this command's parameters is visible in the sequence view.

NOTE: The caller retains ownership of **config**.

Parameters

cmd	The command whose configuration parameters are being set.
config	The configuration settings.

Return Value

The current status of **cmd**. The configuration settings will not be updated if the command is not in a ready state.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVCommandGetCancelProc

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVCommandSetInputs

```
AVCommandStatus AVCommandSetInputs (AVCommand cmd,
ASCab inputs);
```

Description

Sets the input parameters of the specified command. The inputs of a command consist of an **ASCab** detailing properties of the object the command will operate on. Plug-in clients should also attempt to provide the following information.:

Key (see Command Keys)	Stored As	Description
kAVCommandKeyPDDoc	**kASValuePointer**	The document being processed.
kAVCommandKeyBaseFileName	**kASValueString**	The name of the input file, without extension.
kAVCommandKeyOrigExtension	**kASValueString**	The extension of the input file.

The content of the inputs cabinet is not limited to the keys listed above. Clients (or the command handler itself) can specify additional inputs as necessary.

NOTE: The caller retains ownership of **inputs**.

NOTE: **AVCommandExecute** will also attempt to provide **kAVCommandKeyAVDoc**, a pointer to the **AVDoc** being operated on.

NOTE: You can use **AVCommandGetPDDoc** and **AVCommandGetAVDoc** to quickly retrieve the **PDDoc** or **AVDoc** in a command's inputs.

Parameters

cmd	The command whose inputs are being set.
inputs	The input parameters.

Return Value

The current status of **cmd**. The input settings will not be updated if the command is not in a ready state.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVCommandGetInputs

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVCommandSetParams

```
AVCommandStatus AVCommandSetParams (AVCommand cmd,
ASCab params);
```

Description

Sets the parameters for the specified command. The parameters are those pieces of information that can be controlled by the user, such as the pages to act on.

When setting the parameters for a command, *all* parameters in the command will be altered. The command will supply appropriate default parameters for any that are missing from **params**. Passing an empty cabinet will default all parameters.

NOTE: The client retains ownership of **params**.

Parameters

cmd	The command whose parameters are being set.
params	The parameters to be set.

Return Value

The status of **cmd** after the parameters are set. The parameters will not be updated if the command is not in a ready state.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVCommandGetParams

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVCommandShowDialog

```
AVCommandStatus AVCommandShowDialog (AVCommand cmd);
```

Description

Instructs the command to bring up its configuration dialog and gather parameter information from the user. The dialog is shown regardless of the **UIPolicy** of the command.

If the user confirms the configuration dialog, **cmd**'s parameter set is updated, otherwise **cmd** will enter a canceled state.

Query **cmd** for its **kAVCommandKeyCanShowDialog** property using **AVCommandGetProps** to determine it has a configuration dialog.

Parameters

cmd	The command for which the dialog is thrown.

Return Value

The current status of **cmd**.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

None

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVCommandWork

```
AVCommandStatus AVCommandWork (AVCommand cmd);
```

Description

Instructs the command do some work based on its current parameters.

A command will either divide its processing across multiple **AVCommandWork** calls, or perform all the processing within a single call.

If **cmd** is in a working state upon return, it is the client's responsibility to poll the command's "cancel proc" before calling **AVCommandWork** again to continue processing.

Parameters

cmd	The command that is instructed to do some work.

Return Value

The current status of **cmd**. No processing is performed if the command cannot be put in a ready or working state.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVCommandCancel
AVCommandExecute
AVCommandReset

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVConversion

AVConversionConvertFromPDFWithHandler

```
AVConversionStatus AVConversionConvertFromPDFWithHandler
(AVConversionFromPDFHandler handler, ASCab settings,
AVConversionFlags flags, PDDoc doc, ASPathName path,
ASFileSys fileSys, AVStatusMonitorProcs statusMonitor);
```

Description

Converts a PDF document to another file format using the handler specified.

Parameters

handler	Specifies which “ConvertFromPDF” handler to use.
settings	**ASCab** containing the settings to be used in the conversion operation. Pass **NULL** to use the default settings.
flags	Conversion flags.
doc	PDF document to be converted.
path	The desired location for the output file.
fileSys	The file system from which **path** was obtained.
statusMonitor	Contains the progress monitor, cancel proc, and error reporting proc to be used by the converter. Can be **NULL**, or any of its members can be **NULL**.

Return Value

One of the **AVConversionStatus** codes.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVConversionEnumFromPDFConverters
AVConversionConvertToPDFWithHandler

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVConversionConvertToPDF

```
AVConversionStatus AVConversionConvertToPDF
(AVConversionFlags flags, ASPathName path, ASFileSys fileSys,
PDDoc* doc, AVStatusMonitorProcs statusMonitor);
```

Description

Converts the specified file to a PDF document using whatever converter is found. Use this function if you do not know which handler to use.

Multiple conversion handlers can register their services for the same file description, so the first one that matches the file type passed in that has the correct **canDoSync** settings is used.

The converters are enumerated in priority order, starting with the highest priority.

Parameters

flags	Conversion flags.
path	The location of the input file.
fileSys	The file system from which **path** was obtained.
doc	*(Filled by the method)* It is the caller's responsibility to close the document.
statusMonitor	Contains the progress monitor, cancel proc, and error reporting proc to be used by the converter. Can be **NULL**, or any of its members can be **NULL**.

Return Value

One of the **AVConversionStatus** codes.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVConversionConvertToPDF
AVConversionConvertToPDFWithHandler

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVConversionConvertToPDFWithHandler

```
AVConversionStatus AVConversionConvertToPDFWithHandler
(AVConversionToPDFHandler handler, ASCab settings,
AVConversionFlags flags, ASPathName path, ASFileSys fileSys,
PDDoc* doc, AVStatusMonitorProcs statusMonitor);
```

Description

Converts a file to a PDF document using the handler specified.

Parameters

handler	Specifies which **ConvertToPDF** handler to use.
settings	**ASCab** containing the settings to be used in the conversion operation. Pass **NULL** to use the default settings.
flags	Conversion flags.
path	The location of the input file.
fileSys	The file system from which **path** was obtained.
doc	*(Filled by the method)* It is the caller's responsibility to close the document.
statusMonitor	Contains the progress monitor, cancel proc, and error reporting proc to be used by the converter. Can be **NULL**, or any of its members can be **NULL**.

Return Value

One of the **AVConversionStatus** codes.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVConversionEnumToPDFConverters
AVConversionConvertToPDF
AVConversionEnumFromPDFConverters

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVConversionEnumFromPDFConverters

```
void AVConversionEnumFromPDFConverters
(AVConversionFromPDFEnumProc proc,
AVConversionEnumProcData data);
```

Description

Enumerates all registered “ConvertFromPDF” conversion handlers.

Parameters

proc	User-supplied callback.
data	Pointer to user-defined data to pass to **proc** each time it is called.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVConversionEnumToPDFConverters

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVConversionEnumToPDFConverters

```
void AVConversionEnumToPDFConverters
(AVConversionToPDFEnumProc proc,
AVConversionEnumProcData data);
```

Description

Enumerates all registered “ConvertToPDF” conversion handlers.

Parameters

proc	User-supplied callback.
data	Pointer to user-defined data to pass to **proc** each time it is called.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

None

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVCrypt

AVAuthOpen

```
ASBool AVAuthOpen (PDDoc pdDoc);
```

Description

Determines if the current user is authorized to open a document.

If no password is required to open the document, the user will be granted access automatically. If a password is required, the method queries the user for the password and uses it to request open permissions for the document.

Plug-ins: This method can be used as a standard, interactive authorization callback when opening documents through **PDDocOpen**.

Parameters

pdDoc	The document in question.

Return Value

true if the user is authorized to open the document, **false** otherwise.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

PDDocAuthorize

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020002** or higher.

AVCryptDoStdSecurity

```
ASBool AVCryptDoStdSecurity (PDDoc pdDoc, void* secData);
```

Description

Displays the settings dialog for the built-in standard security handler, allowing the user to change a document's permissions. The initial configuration of the dialog may be set by populating the **StdSecurityDataRec** structure prior to calling the method.

NOTE: This method does not modify the document in any way. It is present in the API so that other security handlers can use it, if they choose, as a standard way to display/obtain permissions from a user.

Parameters

pdDoc	The document for which new security data is obtained.
secData	*(Filled by the method)* Pointer to a **StdSecurityDataRec** structure to hold the permissions selected by the user.

Return Value

Returns **true** if the user confirmed her selections, **false** if the she pressed cancel.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

PDDocAuthorize

Example

```
StdSecurityDataRec secData;
memset (&secData, 0, sizeof(StdSecurityDataRec));
secData.size = sizeof(StdSecurityDataRec);

if(AVCryptDoStdSecurity (pdDoc, &secData)) {
     /* User confirmed selection */
}
```

Availability

Plug-ins: Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVCryptGetPassword

```
ASBool AVCryptGetPassword (PDDoc pdDoc, PDPerms permWanted,
void** authData);
```

Description

Displays a standard dialog box that lets a user enter a password. This method does not attempt to validate the password entered by the user. That operation is performed by **PDDocAuthorize**.

It is the client's responsibility to release the memory associated with the password using **ASfree**.

This method is present in the API so that other security handlers can use it, if they choose, as a standard way to obtain a password from a user.

Parameters

pdDoc	The document whose password is obtained from the user. This parameter is used to generate label within the dialog.
permWanted	The permissions requested. Must be an OR of the **PDPerms** values.
authData	*(Allocated and filled by the method)* If the method returns true, **authData** will reference a **char*** containing the password.

Return Value

Returns **true** if the user confirmed her selection, **false** if the she pressed cancel.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

PDDocAuthorize

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVDoc

AVDocAlert

```
ASInt32 AVDocAlert (AVDoc doc, ASInt32 iconType,
const char* msg, const char* button1, const char* button2,
const char* button3, ASBool beep);
```

Description

Displays an alert containing the specified message, icon, and one to three buttons with the specified titles. See **AVAlert** for more information.

On the Windows platform, the modal parent for **doc** (as returned by **WinAppGetModalParent**) is used as the owner window of the message dialog box. As such this method can be used to display alert dialogs in the context of an external window i.e. a web browser.

NOTE: The implementations of the **AVDocAlert** methods call **AVAlert**, which is a replaceable method. If **AVAlert** is replaced, the **AVDocAlert** methods are also affected.

Parameters

doc	*(Windows only)* The **AVDoc** whose modal parent is used as the owner window of the message dialog box.
iconType	The icon to display. Must be one of the **AVAlert Icons**. Macintosh users: These constants are defined as per the standard Macintosh user interface guidelines.
msg	The message to display.
button1, button2, button3	Titles for up to three buttons. Rules: • Use **NULL** to suppress a button's display. • At least **button1** must be non-**NULL**. • **button3** is not displayed if **button2** is **NULL**.
beep	Pass **true** to perform a system beep when the alert is shown.

Return Value

The button number (1, 2, or 3) on which the user clicked.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVAlert
AVDocAlertConfirm
AVDocAlertNote
AVDocAlertYesNo

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

AVDocAlertConfirm

```
ASBool AVDocAlertConfirm (AVDoc doc, const char* msg);
```

Description

Displays a dialog box containing the **ALERT_CAUTION** icon, the specified message and **OK** and **Cancel** buttons. The method also performs a system beep. See **AVDocAlert** for more information.

Parameters

doc	*(Windows only)* The **AVDoc** whose modal parent is used as the owner window of the message dialog box.
msg	The message to display.

Return Value

true if the user clicked **OK**, **false** if the user clicked **Cancel**.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVDocAlert
AVDocAlertNote
AVDocAlertYesNo

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

AVDocAlertNote

```
void AVDocAlertNote (AVDoc doc, const char* msg);
```

Description

Displays a dialog box containing the **ALERT_NOTE** icon, the specified message and an **OK** button. The method also performs a system beep. See **AVDocAlert** for more information.

Parameters

doc	*(Windows only)* The **AVDoc** whose modal parent is used as the owner window of the message dialog box.
msg	The message to display.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVDocAlert
AVDocAlertConfirm
AVDocAlertYesNo

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

AVDocAlertYesNo

```
ASInt32 AVDocAlertYesNo (AVDoc doc, ASInt32 iconType,
const char* msg, ASBool cancel, ASBool beep);
```

Description

Displays an dialog box containing the specified message, icon, and two or three buttons with the titles **Yes**, **No**, and (optionally) **Cancel**. See **AVDocAlert** for more information.

Parameters

doc	*(Windows only)* The **AVDoc** whose modal parent is used as the owner window of the message dialog box.
iconType	The icon to display. Must be one of the **AVAlert Icons**. Macintosh users: These constants are defined as per the standard Macintosh user interface guidelines.
msg	The message to display.
cancel	**true** if cancel button should be provided, **false** otherwise.
beep	**true** if it beeps, **false** otherwise.

Return Value

The button number (1, 2, or 3) on which the user clicked.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVDocAlert
AVDocAlertConfirm
AVDocAlertNote

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

AVDocClearSelection

```
ASBool AVDocClearSelection (AVDoc doc, ASBool clearHighlight);
```

Description

Clears and destroys the current selection by calling the appropriate selection server's **AVDocSelectionLosingSelectionProc**.

Parameters

doc	The document whose selection is cleared.
clearHighlight	Pass **true**, to instruct the Acrobat viewer to remove the selection's highlighting; if it has not already been removed. The selection handler may only mark the highlighted regions of the display invalid, but does not force an immediate redraw of the page view. Use **AVPageViewDrawNow** to force an immediate redraw if you wish.

Return Value

true if the current selection was cleared, **false** otherwise.

Exceptions

None

Notifications

Broadcasts **AVDocWillClearSelection** if the selection type is not **ASAtomNull**.

Header File

AVCalls.h

Related Methods

AVDocSetSelection
AVDocCopySelection
AVDocEnumSelection
AVDocDoSelectionProperties
AVDocGetSelection
AVDocDeleteSelection

Example

```
PDTextSelect TextSelection;
HiliteEntry Hilite;
PDPage CurrentPDPage = PDDocAcquirePage(CurrentPDDoc, PageNum);
     Hilite.offset= (ASUns16) Offset;
     Hilite.length= 0;
     TextSelection = PDTextSelectCreatePageHilite(CurrentPDPage
     ,&Hilite, 1);
AVDocSetSelection(CurrentAVDoc,
     ASAtomFromString("Text"), (void *)
     TextSelection, true);
if(show)
     AVDocShowSelection(CurrentAVDoc);
else
     AVDocClearSelection(CurrentAVDoc, true);
     PDPageRelease(CurrentPDPage);
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVDocClose

```
ASBool AVDocClose (AVDoc doc, ASBool noSave);
```

Description

Closes the document window, optionally prompting the user to save the document if it has been modified. When this method closes the **AVDoc**, it also closes the underlying **PDDoc**.

You can replace this method with your own version, using **HFTReplaceEntry**.

Parameters

doc	The document to close.
noSave	If **true**, the document is closed without prompting the user and without saving, even if the document has been modified. Because this can cause data loss without user approval, use this feature judiciously. If **false**, prompts user to save the document if it has been modified.

Return Value

true if the document closed, **false** if it did not (for example, if the user was prompted with the **Save** dialog and chose **Cancel**). The document will always close if **noSave** is **true**.

Exceptions

None

Notifications

AVDocWillClose
AVDocDidClose

Header File

AVCalls.h

Related Methods

AVDocOpenFromFile
AVDocOpenFromPDDoc
AVDocDoSave

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVDocCopyAction

```
PDAction AVDocCopyAction (AVDoc srcDoc, PDAction action,
AVDoc destDoc);
```

Description

Makes a copy of the action for the (possibly different) specified **AVDoc**. Calls the **AVActionCopyProc** callback in **AVActionHandlerProcs**.

NOTE: The Acrobat viewers define **AVActionCopyProc** callbacks for all currently defined actions.

Parameters

srcDoc	The document containing **action**.
action	The **PDAction** to copy.
destDoc	The document to which **action** is copied.

Return Value

A copy of the action.

Exceptions

avErrBadActionCopy - the associated action handler has not implemented the **AVActionCopyProc** callback.

pdErrBadAction - the action dictionary is invalid.

pdErrOpNotPermitted - the user does not have the required permissions level for **destDoc** to perform this operation.

Raises the standard exceptions if memory limit problems occur.

Notifications

None

Header File

AVCalls.h

Related methods

AVDocCopyActionCommon

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020003** or higher.

AVDocCopyActionCommon

```
PDAction AVDocCopyActionCommon (AVDoc srcDoc, PDAction action,
AVDoc destDoc);
```

Description

Makes a copy of the action for the (possibly different) specified **AVDoc**.

This copy includes only those fields that are described in the *PDF Reference* as common to all actions. (This list currently includes **Type**, **S**, and **Next**.) This method is a proper “starting point” for the design of a Copy method for a custom action. This allows a plug-in to concentrate on those member objects specific to the custom action.

Parameters

srcDoc	The document containing **action**.
action	The **PDAction** to copy.
destDoc	The document to which **action** is copied.

Return Value

A copy of the action.

Exceptions

Raises the standard exceptions if memory limit problems occur.

Notifications

None

Header File

AVCalls.h

Related methods

AVDocCopyAction

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020003** or higher.

AVDocCopyAdditionalActions

```
void AVDocCopyAdditionalActions (AVDoc srcDoc, CosObj srcDict,
AVDoc destDoc, CosObj destDict);
```

Description

Copies any additional actions (**AA**) from a Cos Dictionary to a Cos Dictionary in the (possibly different) specified **AVDoc**.

This method copies the following keys: **E**, **X**, **D**, **U**, **O**, **C**, **FP**, **PP**, **NP**, and **LP**. This method is designed to aid plug-ins in copying additional actions for pages.

For copying annotations, it is better to use **AVDocCopyAnnotCommon**.

Parameters

srcDoc	The document containing srcDict.
srcDict	The dictionary from which the action is copied.
destDoc	The document to which the action is copied.
destDict	The dictionary to which the action is copied.

Return Value

A copy of the action.

Exceptions

cosErrExpectedDict - the object stored under the /AA key in **srcDict** is not a CosDict.

Raises the standard exceptions if memory limit problems occur.

Notifications

None

Header File

AVCalls.h

Related methods

AVDocCopyAction

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020003** or higher.

AVDocCopyAnnot

```
PDAnnot AVDocCopyAnnot (AVDoc srcDoc, PDAnnot annot,
AVDoc destDoc);
```

Description

Makes a copy of the annotation for the (possibly different) specified **AVDoc**. Calls the **AVAnnotHandlerCopyProc** callback in **AVAnnotHandler**.

NOTE: The Acrobat viewers define **AVAnnotHandlerCopyProc** callbacks for all currently defined annotations.

Parameters

srcDoc	The document containing **annot**.
annot	The annotation to copy.
destDoc	The document to which **annot** is copied.

Return Value

A copy of the annotation.

Exceptions

avErrBadAnnotationCopy - the associated annotation handler has not implemented the **AVAnnotHandlerCopyProc** callback.

Raises the standard exceptions if memory limit problems occur.

Notifications

None

Header File

AVCalls.h

Related methods

AVDocCopyAnnotCommon

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020003** or higher.

AVDocCopyAnnotCommon

```
PDAnnot AVDocCopyAnnotCommon (AVDoc fromDoc, PDAnnot anAnnot,
AVDoc toDoc);
```

Description

Makes a copy of the annotation for the (possibly different) specified **AVDoc**.

This copy includes only those fields that are described in the *PDF Reference* as common to all annotations. (This list currently includes **Type**, **Subtype**, **Rect**, **Border**, **C**, **T**, **M**, **F**, **H**, **AS**, **BS**, and **AA**.) This method is a proper “starting point” for the design of a Copy method for a custom annotation. This allows a plug-in to concentrate on those member objects specific to the custom annotation.

Parameters

fromDoc	The document whose annotation is copied.
anAnnot	The annotation to copy.
toDoc	The document to which the annotation is copied.

Return Value

A copy of the annotation.

Exceptions

Raises the standard exceptions if memory limit problems occur.

Notifications

None

Header File

AVCalls.h

Related methods

AVDocCopyAnnot

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020003** or higher.

AVDocCopySelection

```
void AVDocCopySelection (AVDoc doc);
```

Description

Copies the current selection to the clipboard, if possible. The selection is copied if the selection server has a **AVDocSelectionCopyProc** callback, and the selection server's **AVDocSelectionCanCopyProc** callback returns **true**. If the selection server does not have a **AVDocSelectionCanCopyProc** method, a default value of **true** is used.

The selection is copied by calling the selection server's **AVDocSelectionCopyProc** callback.

Parameters

doc	The document whose selection is copied.

Return Value

None

Exceptions

Only those raised by the selection server's **AVDocSelectionCopyProc** and **AVDocSelectionCanCopyProc** callbacks.

Notifications

None

Header File

AVCalls.h

Related methods

AVDocRegisterSelectionServer
AVDocSetSelection
AVDocDeleteSelection
AVDocClearSelection
AVDocGetSelectionType
AVDocEnumSelection

Example

```
PDTextSelect TextSelection;
HiliteEntry Hilite;
PDPage CurrentPDPage =
     PDDocAcquirePage(CurrentPDDoc, PageNum);
Hilite.offset = (ASUns16) Offset;
Hilite.length = 0;
TextSelection =
     PDTextSelectCreatePageHilite(
           CurrentPDPage, &Hilite, 1);
AVDocSetSelection(CurrentAVDoc,
     ASAtomFromString("Text"), (void *)
     TextSelection, true);
AVDocCopySelection(doc);
AVDocDeleteSelection(doc);
PDPageRelease(CurrentPDPage);
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVDocDeleteSelection

```
ASBool AVDocDeleteSelection (AVDoc doc);
```

Description

Deletes the specified document's current selection, if possible. The selection is deleted if changing the selection is currently permitted, the selection server has an **AVDocSelectionDeleteProc** callback, and the selection server's **AVDocSelectionCanDeleteProc** callback returns **true**. If the selection server does not have a **AVDocSelectionCanDeleteProc** callback, a default value of **true** is used.

The selection is deleted by calling the selection server's **AVDocSelectionDeleteProc** callback.

Parameters

doc	The document whose selection is deleted.

Return Value

true if the current selection was actually deleted, **false** otherwise.

Exceptions

Only those raised by the selection server's **AVDocSelectionDeleteProc** and **AVDocSelectionCanDeleteProc** callbacks.

Notifications

AVDocDidDeleteSelection

Header File

AVCalls.h

Related methods

AVDocRegisterSelectionServer
AVDocGetSelection
AVDocSetSelection
AVDocClearSelection
AVDocCopySelection
AVDocEnumSelection

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVDocDoActionPropsDialog

```
ASBool AVDocDoActionPropsDialog (AVDoc doc, PDAction* action,
const char* dialogTitle);
```

Description

Displays a modal dialog that allows a user to specify an action. Used, for example, by forms to add actions to fields.

Parameters

doc	The document in which the action is specified.
action	The specified action.
dialogTitle	Title for the dialog.

Return Value

true if the user clicked the **Set Link** button, **false** if the user clicked **Cancel**.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVDocPerformAction

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020002** or higher.

AVDocDoCopyAs

```
ASBool AVDocDoCopyAs (AVDoc doc);
```

Description

Prompts the user with a standard file dialog and copies the file **doc** byte for byte. Displays a progress monitor showing the progress of the file copy.

Parameters

doc	The document to copy.

Return Value

true if the copy was successful, **false** otherwise.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVDocDoPrint
AVDocDoSave
AVDocDoSaveAs

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

AVDocDoPrint

```
void AVDocDoPrint (AVDoc doc);
```

Description

Performs the print operation, including user dialogs.

You can replace this method with your own version, using **HFTReplaceEntry**.

Parameters

doc	The document to print.

Return Value

None

Notifications

AVDocDidPrint
AVDocWillPrint

Header File

AVCalls.h

Related Methods

AVDocDoCopyAs
AVDocDoSave
AVDocPrintPages
AVDocPrintPagesWithParams

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

AVDocDoSave

```
ASBool AVDocDoSave (AVDoc doc);
```

Description

Saves a file, including handling any user interface (for example, a **Save File** dialog) that is needed. Plug-ins do not need to call this method directly, but it is available for plug-ins that need to override the Acrobat viewer's built-in save method, for example to save the changes made to a PDF file into a special file, but not save the original PDF file.

You can replace this method with your own version, using **HFTReplaceEntry**.

Parameters

doc	The document to save.

Return Value

true if the document was successfully saved, **false** otherwise.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVDocDoCopyAs
AVDocDoPrint
AVDocDoSaveAs
AVDocDoSaveAsWithParams

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVDocDoSaveAs

```
ASBool AVDocDoSaveAs (AVDoc doc);
```

Description

Displays a file dialog and saves the document to a potentially new name. Allows plug-ins (such as Optimizer) to do their own file saving.

You can replace this method with your own version, using **HFTReplaceEntry**.

Parameters

doc	The document to save.

Return Value

true if the document was successfully saved, **false** otherwise.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVDocDoCopyAs
AVDocDoPrint
AVDocDoSave
AVDocDoSaveAsWithParams

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020002** or higher.

AVDocDoSaveAsWithParams

```
ASBool AVDocDoSaveAsWithParams (AVDoc doc,
AVDocSaveParams params);
```

Description

Saves a file, using the parameters specified in **paramsIn**.

You can replace this method with your own version, using **HFTReplaceEntry**.

Parameters

doc	The document to save.
params	A structure with information telling how the **AVDoc** is saved.

Return Value

true if the document was successfully saved, **false** otherwise.

Header File

AVCalls.h

Related Methods

AVDocDoCopyAs
AVDocDoPrint
AVDocDoSave
AVDocDoSaveAs

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

AVDocDoSelectionProperties

```
void AVDocDoSelectionProperties (AVDoc doc);
```

Description

Displays the user interface, if any, for setting the current selection's properties. It does this by invoking the **AVDocSelectionPropertiesProc** callback, if any, of the current selection's selection server.

Parameters

doc	The document containing the selection whose properties are set.

Return Value

None

Exceptions

Only those raised by the selection server's **AVDocSelectionPropertiesProc** callback.

Notifications

None

Header File

AVCalls.h

Related Methods

AVDocRegisterSelectionServer
AVDocSetSelection

Example

```
if (PtInRect(&myRect, point))
     AVDocDoSelectionProperties(doc);
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVDocEnumSelection

```
void AVDocEnumSelection (AVDoc doc, AVSelectionEnumProc proc,
void* clientData);
```

Description

Enumerates the elements of the current selection by calling the current selection server's **AVDocSelectionEnumSelectionProc** callback. If the selection server does not have an **AVDocSelectionEnumSelectionProc**, calls **proc** and passes the entire selection to it in the **aSelectedObject** parameter.

Parameters

doc	The document whose selection is enumerated.
proc	User-supplied callback to call for each element in the selection. Enumeration ends if **proc** returns **false**.
clientData	Pointer to user-supplied data to pass to **proc** each time it is called.

Return Value

None

Exceptions

Only those raised by the selection server's **AVDocSelectionEnumSelectionProc** callback, and those raised by **proc**.

Notifications

None

Header File

AVCalls.h

Related Methods

AVDocRegisterSelectionServer
AVDocSetSelection
AVDocClearSelection
AVDocDeleteSelection
AVDocCopySelection
AVDocSelectionEnumPageRanges

Example

```
static ACCB1 ASBool ACCB2 mySelectEnum(
     AVDoc doc, void* clientData,
     void* selectedObject)
{
     ASInt32 page = PDTextSelectGetPage(
            (PDTextSelect) selectedObject);
     return false;
}

AVDocEnumSelection(doc,
     ASCallbackCreateProto(
     AVSelectionEnumProc, &mySelectEnum),
     NULL);
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVDocFromPDDoc

```
AVDoc AVDocFromPDDoc (PDDoc pdDoc);
```

Description

Gets the **AVDoc** associated with a **PDDoc**.

Parameters

pdDoc	The **PDDoc** whose **AVDoc** is to be returned.

Return Value

If an **AVDoc** is already opened for this **PDDoc**, returns the **AVDoc**. Otherwise returns **NULL**.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVDocGetPDDoc

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVDocGetAVWindow

```
AVWindow AVDocGetAVWindow (AVDoc doc);
```

Description

Gets the **AVWindow** in which the document is being displayed.

Parameters

doc	The document whose **AVWindow** is obtained.

Return Value

The document's **AVWindow**.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVDocGetPageView

Example

```
AVWindow myWin = AVDocGetAVWindow(doc);
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVDocGetClientName

```
ASInt32 AVDocGetClientName (AVDoc avDoc, char* buffer,
ASInt32 bufSize);
```

Description

Gets the **AVDoc** client (container application) name.

This method can be used by a plug-in to determine which client application caused the Acrobat viewer to open a document.

Parameters

avDoc	The document whose client name is obtained.
buffer	*(Filled by the method)* The buffer into which the client name is written. May be up to 255 characters. The client name is null-terminated. If the client name is longer than **bufSize**, the first **bufSize** – 1 bytes are copied into it, followed by a **NULL**.
bufSize	The size of **buffer**, in bytes.

Return Value

The number of characters written into **buffer**, excluding the **NULL** termination. Returns **0** if the specified document does not have a client associated with it.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVDocSetClientName

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020001** or higher.

AVDocGetPageText

```
void AVDocGetPageText (AVDoc doc, ASInt32 pageNum,
PDTextSelect pdText, ASAtom format, AVTextCopyProc copyProc,
void* clientData);
```

Description

Gets the text from the specified text selection, converts it to the specified format, and passes it to a user-supplied procedure.

Parameters

doc	The document from which text is obtained.
pageNum	The page number in **doc** from which text is obtained. The first page in a document is page 0.
pdText	The text selection whose text is obtained. Passes **NULL** to get all the text on the page.
format	The format in which text is desired. The following are allowed values (these strings must be converted to **ASAtoms** using **ASAtomFromString**): **All** — (Mac OS/Windows) Calls **copyProc** once with each available format. **Text** — (Mac OS/Windows) Calls **copyProc** twice. The first time, it passes the text in the specified selection. The text is passed using the same platform encoding as when it is put onto the clipboard (**format** = **Text**). The second time, it passes a Unicode version of the text (**format** = **UCSText**). **Style** — (Mac OS only) Calls **copyProc** twice. The first time, it passes the **Text** representation. The second time, it passes a **StyleInfo** record. **RTF** — (Mac OS/WIndows) Calls **copyProc** twice. The first time, it passes the text in Rich Text Format. The second time, it passes a Unicode version of the text. Upon using/manipulating these texts, you should check the format of these texts in **copyProc**.
copyProc	User-supplied callback to which the text is passed.
clientData	Pointer to user-supplied data to pass to **copyProc** each time it is called.

Return Value

None

Exceptions

pdErrOpNotPermitted

Notifications

None

Header File

AVCalls.h

Related Methods

PDTextSelectCreateRanges
PDTextSelectCreatePageHilite
PDTextSelectCreateWordHilite
PDDocCreateTextSelect
PDWordFinderEnumWords
PDWordFinderAcquireWordList

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020001** or higher.

AVDocGetPageView

```
AVPageView AVDocGetPageView (AVDoc doc);
```

Description

Gets the **AVPageView** for the specified document.

If the **AVDoc** is embedded in an external window (such as an embedded PDF in HTML in a Web browser's window), returns **NULL**.

Parameters

doc	The document whose **AVPageView** is obtained.

Return Value

The document's **AVPageView**. **NULL** if the **AVDoc** is embedded in an external window.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVDocGetAVWindow
AVDocGetViewMode

Example

```
AVPageView avPageView =
     AVDocGetPageView(AVAppGetActiveDoc());
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVDocGetPDDoc

```
PDDoc AVDocGetPDDoc (AVDoc avDoc);
```

Description

Gets the **PDDoc** to associate with the specified **AVDoc**.

Parameters

avDoc	The document whose **PDDoc** is obtained.

Return Value

The **PDDoc** associated with **avDoc**.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVDocOpenFromPDDoc
PDEnumDocs

Example

```
ACCB1 ASBool ACCB2 myAppEnumProc(
     AVDoc doc, void* clientData)
{
     if(PDDocGetNumPages(AVDocGetPDDoc(doc))
            > 100)
            AVAlertNote("Long document");
     return true;
}
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVDocGetSelection

```
void* AVDocGetSelection (AVDoc doc);
```

Description

Gets the current selection for the specified document.

Parameters

doc	The document whose selection is obtained.

Return Value

The current selection, or **NULL** if there is no selection. See **Selection Types** for a list of the data types returned for the built-in selection types. A **NULL** return value from this method is not sufficient to determine that there is no selection, use **AVDocGetSelectionType** instead.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVDocSetSelection
AVDocGetSelectionType
AVDocClearSelection
AVDocDeleteSelection
AVDocEnumSelection
AVDocCopySelection

Example

```
AVGrafSelect gs;

if(ASAtomFromString("Bitmap") ==
     AVDocGetSelectionType(doc)){
     gs = (AVGrafSelect)AVDocGetSelection(doc);
     }
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVDocGetSelectionServerByType

```
AVDocSelectionServer AVDocGetSelectionServerByType
(ASAtom type);
```

Description

Gets the selection server that handles the specified selection type.

Parameters

type	The **ASAtom** corresponding to the type for which the selection server was registered. The string for **type** can be converted to an **ASAtom** using **ASAtomFromString**.

Return Value

The selection server that handles the specified type. Returns **NULL** if no such selection server is registered.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVDocRegisterSelectionServer

Example

```
AVDocSelectionServer server;
if(server =
     AVDocGetSelectionServerByType(
           ASAtomFromString("imageSelect"))
{
     AVDocClearSelection(doc, true);
}
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVDocGetSelectionType

```
ASAtom AVDocGetSelectionType (AVDoc doc);
```

Description

Gets the current selection's type for the specified document.

Parameters

doc	The document whose selection type is obtained.

Return Value

The **ASAtom** corresponding to the current selection type. Returns **ASAtomNull** if there is no selection. The **ASAtom** returned can be converted to a string using **ASAtomGetString**. See **Selection Types** for a list of the built-in selection types.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVDocGetSelection
AVDocSetSelection

Example

```
PDTextSelect ts;

if(ASAtomFromString("Text") ==
     AVDocGetSelectionType(doc))
{
     ts = AVDocGetSelection(doc);
}
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVDocGetSplitterPosition

```
ASInt16 AVDocGetSplitterPosition (AVDoc doc);
```

Description

Gets the splitter position. The splitter is the vertical division between the bookmark/thumbnail pane and the document pane. The default splitter location is saved in the Acrobat viewer's preferences file, and can be read/set using **AVAppGetPreference** and **AVAppSetPreference**.

Parameters

doc	The document whose splitter position is obtained.

Return Value

The width of the bookmark/thumbnail pane, measured in pixels. Returns 0 if the bookmark/thumbnail pane is not currently displayed.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVDocSetSplitterPosition
AVAppGetPreference

Example

```
if(AVDocGetSplitterPosition(doc) < 72)
     AVDocSetSplitterPosition(doc, 72);
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVDocGetViewDef

```
void AVDocGetViewDef (AVDoc doc, AVDocViewDef viewDef);
```

Description

Fills out the given **AVDocViewDef** structure with the information needed to restore this document's state at a later date. You must set the "use" fields as desired.

Parameters

doc	The document whose state is recorded.
viewDef	A pointer to the structure that stores the state.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVDocSetViewDef

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020002** or higher.

AVDocGetViewMode

```
PDPageMode AVDocGetViewMode (AVDoc doc);
```

Description

Gets the current view mode.

Parameters

doc	The document whose view mode is obtained.

Return Value

The current view mode.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVDocSetViewMode
PDDocGetPageMode

Example

```
if(AVDocGetViewMode(doc) == PDUseNone)
     AVDocSetViewMode(doc, PDUseBookmarks);
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVDocIsDead

```
ASBool AVDocIsDead (AVDoc avDoc);
```

Description

Determines whether a given document is “dead.” When the connection to a document is severed (e.g., when its HTTP connection is broken) the document becomes “dead” for an interval before it is closed. During that interval, the document may be visible and open but no operations should be performed on the document.

Parameters

avDoc	The document being investigated.

Return Value

`true` if the given document is dead; **`false`** otherwise.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

None

Availability

Available if **`PI_ACROVIEW_VERSION`** (in PIRequir.h) is set to **`0x00050000`** or higher.

AVDocIsExternal

```
ASBool AVDocIsExternal (AVDoc doc);
```

Description

Determines whether a given document is being displayed in an application's external window (such as in a Web browser's window).

Parameters

doc	The document being tested.

Return Value

true if the given document is being displayed in an application's external window, **false** otherwise.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

None

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020002** or higher.

AVDocIsReadOnly

```
ASBool AVDocIsReadOnly (AVDoc doc);
```

Description

Checks to see if an **AVDoc** is read-only.

Parameters

doc	The **AVDoc** whose read-only state is checked.

Return Value

true if the given document is read-only, **false** otherwise.

Header File

AVCalls.h

Related Methods

AVDocSetReadOnly

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

AVDocOpenFromASFileWithParams

```
AVDoc AVDocOpenFromASFileWithParams (ASFile file,
char* tempTitle, AVDocOpenParams params);
```

Description

Opens and displays a document from an **ASFile**, using the specified parameters to control the window's size, location, and visibility.

If you want to display a page from a PDF file as a bitmap, use **PDPageDrawContentsToWindow**.

Parameters

file	The **ASFile** to open.
tempTitle	An optional window title for the document.
params	Open parameters for the document.

Return Value

An **AVDoc** object for **file**.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVDocOpenFromFileWithParams
AVDocOpenFromPDDocWithParams

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020002** or higher.

AVDocOpenFromFile

```
AVDoc AVDocOpenFromFile (ASPathName pathName,
ASFileSys fileSys, char* tempTitle);
```

Description

Opens and displays a document from a file. This is equivalent to **AVDocOpenFromFileWithParams(pathName, fileSys, tempTitle, NULL)**. If you want to display a page from a PDF file as a bitmap, use **PDPageDrawContentsToWindow**.

NOTE: Do not open and then immediately close an **AVDoc** without letting at least one event loop complete.

Parameters

pathName	The file to open.
fileSys	The file system on which **pathName** resides. You can obtain the default file system with **ASGetDefaultFileSys**.
tempTitle	If **tempTitle!=NULL**, **pathname** is a temporary file, and **tempTitle** is used as the window's title.

Return Value

The document that was opened. Returns **NULL** if the viewer failed to open the document.

Exceptions

None

Notifications

AVDocWillOpenFromFile
AVDocDidDeleteSelection
AVAppFrontDocDidChange
AVDocDidActivate
AVDocDidDeactivate

The following notifications are broadcast if the document has a valid open action:

AVDocWillPerformAction
AVDocDidPerformAction

Header File

AVCalls.h

Related Methods

AVDocOpenFromFileWithParams
AVDocOpenFromPDDoc
AVDocOpenFromPDDocWithParams
AVDocClose

Example

```
AVDoc myDoc = AVDocOpenFromFile(
     myPathName, ASGetDefaultFileSys(),
     NULL);
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVDocOpenFromFileWithParams

```
AVDoc AVDocOpenFromFileWithParams (ASPathName pathName,
ASFileSys fileSys, char* tempTitle, AVDocOpenParams params);
```

Description

Opens and displays a document from a file, using the specified parameters to control the window's size, location, and visibility.

You can replace this method with your own version, using **HFTReplaceEntry**.

If you want to display a page from a PDF file as a bitmap, use **PDPageDrawContentsToWindow**.

NOTE: Do not open and then immediately close an **AVDoc** without letting at least one event loop complete.

Parameters

pathName	The file to open.
fileSys	The file system on which **pathName** resides. You can obtain the default file system with **ASGetDefaultFileSys**.
tempTitle	If **tempTitle!=NULL**, **pathNam**e is a temporary file and **tempTitle** is used as the window's title.
params	Parameters used when opening the file. Can be **NULL**.

Return Value

The document that was opened.

Exceptions

None

Notifications

AVDocWillOpenFromFile
AVDocDidOpen
AVAppFrontDocDidChange
AVDocDidActivate
AVDocDidDeactivate

The following notifications are broadcast if the document has a valid open action:

AVDocWillPerformAction
AVDocDidPerformAction

Header File

AVCalls.h

Related Methods

AVDocOpenFromASFileWithParams
AVDocOpenFromFile
AVDocOpenFromPDDoc
AVDocOpenFromPDDocWithParams
AVDocClose

Example

```
AVDocOpenParamsRec params;
AVDoc myDoc;

params.size = sizeof(AVDocOpenParamsRec);
params.useFrame = false;
params.useVisible = true;
params.visible = false;
params.useServerType = false;
params.useReadOnly = true;
params.readOnly = true;
params.useViewType = true;
params.viewType = "AVPageView";
params.usePermReqProc = true;
params.permReqProc = ASCallbackCreateProto(AVDocPermReqProc,
&myPermReq);
myDoc =
     AVDocOpenFromFileWithParams(myPathName,
           NULL, NULL, &params);
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVDocOpenFromPDDoc

```
AVDoc AVDocOpenFromPDDoc (PDDoc doc, char* tempTitle);
```

Description

Opens and returns an **AVDoc** view of **pdDoc**. In addition, acquires **pdDoc**. This method is equivalent to **AVDocOpenFromPDDocWithParams(pdDoc, tempTitle, NULL)**. If you want to display a page from a PDF file as a bitmap, use **PDPageDrawContentsToWindow**.

NOTE: Do not open and then immediately close an **AVDoc** without letting at least one event loop complete.

NOTE: **AVDocClose** should be used in place of **PDDocClose** after **AVDocOpenFromPDDoc** is called. **AVDocClose** will decrement the pdDoc appropriately and free document-related resources.

Parameters

doc	The document to open.
tempTitle	If **tempTitle!=NULL**, **pathnam**e is a temporary file and **tempTitle** is used as the window's title.

Return Value

NULL if failure occurs.

Exceptions

Raises **genErrGeneral** if **pdDoc** is **NULL** or has 0 pages. Raises **pdErrBadAction** if the document's open action is recursive. Raises **avErrCantOpenMoreThanTenDocs** if the maximum number of documents is already open. Raises **genErrNoMemory** if there is insufficient memory to open the document.

Notifications

AVAppFrontDocDidChange
AVDocDidActivate
AVDocDidDeactivate

The following notifications are broadcast if the document has a valid open action:

AVDocWillPerformAction
AVDocDidPerformAction

Header File

AVCalls.h

Related Methods

AVDocOpenFromPDDocWithParams
AVDocOpenFromFile
AVDocOpenFromFileWithParams
AVDocClose

Example

```
AVDocOpenFromPDDoc(somePDDoc, NULL);
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVDocOpenFromPDDocWithParams

```
AVDoc AVDocOpenFromPDDocWithParams (PDDoc pdDoc,
char* tempTitle, AVDocOpenParams params);
```

Description

Opens and displays a document from a **PDDoc**, using the specified parameters to control the window's size, location, and visibility.

If you want to display a page from a PDF file as a bitmap, use **PDPageDrawContentsToWindow**.

NOTE: Do not open and then immediately close an AVDoc without letting at least one event loop complete.

Parameters

pdDoc	The document to open and display.
tempTitle	If **tempTitle!=NULL**, **pathnam**e is a temporary file and **tempTitle** is used as the window's title.
params	Parameters used when opening the file. Can be **NULL**.

Return Value

The document that was opened.

Exceptions

None

Notifications

AVAppFrontDocDidChange
AVDocDidActivate
AVDocDidDeactivate

The following notifications are broadcast if the document has a valid open action:

AVDocWillPerformAction
AVDocDidPerformAction

Header File

AVCalls.h

Related Methods

AVDocOpenFromASFileWithParams
AVDocOpenFromFile
AVDocOpenFromFileWithParams
AVDocOpenFromPDDoc

AVDocClose

Example

```
AVDocOpenParamsRec params;

params.size = sizeof(AVDocOpenParamsRec);
params.useFrame = false;
params.useVisible = true;
params.visible = false;
AVDocOpenFromPDDocWithParams(somePDDoc,
     NULL, &params);
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVDocPerformAction

```
void AVDocPerformAction (AVDoc doc, PDAction action);
```

Description

Performs an action.

Parameters

doc	The document containing the action to perform.
action	The action to perform.

Return Value

None

Exceptions

pdErrBadAction

Notifications

AVDocWillPerformAction
AVDocDidPerformAction

Header File

AVCalls.h

Related Methods

AVDocDoActionPropsDialog

Example

```
DURING
     action = PDBookmarkGetAction(item);
HANDLER
     err = ERRORCODE;
END_HANDLER
if(!err){
     DURING
          AVDocPerformAction(doc, action);
     HANDLER
          err = ERRORCODE;
     END_HANDLER
}
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVDocPerformActionEx

```
void AVDocPerformActionEx (AVDoc doc, PDAction action,
AVActionContext data);
```

Description

Same as **AVDocPerformAction**, but provides context for the execution of the action.

Parameters

doc	The document containing the action to perform.
action	The action to perform.
data	Context for the execution of the action.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVDocGetPDDoc
AVDocPerformAction

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVDocPermRequest

```
ASBool AVDocPermRequest (AVDoc doc, PDPermReqObj obj,
PDPermReqOpr opr);
```

Description

An exact way to ask if an operation is permitted. This routine should be used to query all UI-level permissions—e.g., to determine whether a tool button or menu item is enabled or whether a tool can act upon a given document. This routine should be used instead of some combination of **AVDocIsReadOnly**/**AVDocIsExternal**/ **PDDocPermRequest**. **AVDocPermRequest** calls **PDDocPermRequest** internally in the process of determining whether to grant the request.

Parameters

doc	The document opened in Acrobat.
obj	Description of target object of permissions request.
opr	Description of the target operation of a permissions request.

Return Value

true if operation is permitted; **false** otherwise.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVDocIsReadOnly
AVDocIsExternal
PDDocPermRequest

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVDocPrintPages

```
void AVDocPrintPages (AVDoc doc, ASInt32 firstPage,
ASInt32 lastPage, ASInt32 psLevel, ASBool binaryOK,
ASBool shrinkToFit);
```

Description

Prints without displaying any user dialogs. The current printer, page settings, and job settings are used. Printing is complete when this method returns.

You can replace this method with your own version, using **HFTReplaceEntry**.

NOTE: If security has been set on a file so that it is not printable, the document won't print, but no error is raised. Check the security before printing the file.

Parameters

doc	The document from which pages are printed.
firstPage	The first page in **doc** to print.
lastPage	The last page in **doc** to print.
psLevel	Applies to PostScript printing. Must be either **1** or **2**. If **1**, Level 1 PostScript code is generated. If **2**, Level 2 PostScript code is generated.
binaryOK	Applies to PostScript printing. If **true**, the PostScript code may contain binary data. If **false**, all binary data is encoded into an ASCII format.
shrinkToFit	If **true**, the page is shrunk (if necessary) to fit into the image-able area of a page in the printer. If **false**, pages are printed at actual size and may appear clipped on the printed page.

Return Value

None

Exceptions

Raises **genErrBadParm** if an invalid parameter is provided. Can raise any of the **CosErrExpected** exceptions, such as **cosErrExpectedDirect** or **cosErrExpectedNumber**.

In general, this method can raise any exception that can occur during the parsing of a page and its resources, such as **pdErrUnknownProcsets** or **pdErrUnableToExtractFontErr**.

Notifications

PDDocWillPrintPages

PDDocWillPrintPage
PDDocDidPrintPage
PDDocDidPrintPages
PDDocDidPrintTiledPage
PDDocPrintingTiledPage
PDDocWillPrintTiledPage

Header File

AVCalls.h

Related Methods

AVDocDoPrint
AVDocPrintPagesWithParams

Example

```
AVDocPrintPages(AVAppGetActiveDoc(), 0, 2,
     2, false, false);
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVDocPrintPagesWithParams

```
void AVDocPrintPagesWithParams (AVDoc doc,
AVDocPrintParams params);
```

Description

Prints a document with a full range of options. Printing is complete when this method returns.

Allows interactive printing to the specified printer (Windows, Mac OS, and UNIX).

Performs “embedded” printing. That is, allows a PDF page to print within a bounding rectangle on a page.

You can replace this method with your own version, using **HFTReplaceEntry**.

NOTE: If security has been set on a file so that it is not printable, the document won’t print, but no error is raised. Check the security before printing the file.

Parameters

doc	The **AVDoc** from which to print pages.
params	A structure containing printing parameters. See **AVDocPrintParams**. NOTE: With Reader, you cannot use the emitToFile flag. For Reader, use the emitToPrinter, interactive, or embedded flags.

Return Value

None

Exceptions

Raises **genErrBadParm** if an invalid parameter is provided. Can raise any of the **CosErrExpected** exceptions, such as **cosErrExpectedDirect** or **cosErrExpectedNumber**.

In general, this method can raise any exception that can occur during the parsing of a page and its resources, such as **pdErrUnknownProcsets** or **pdErrUnableToExtractFontErr**.

Notifications

PDDocWillPrintPages
PDDocWillPrintPage
PDDocDidPrintPage
PDDocDidPrintPages
PDDocDidPrintTiledPage
PDDocPrintingTiledPage

PDDocWillPrintTiledPage

Header File

AVCalls.h

Related Methods

AVDocDoPrint
AVDocPrintPages

Example One

```
AVDocPrintParamsRec myParams;
AVDoc doc;
char buf[255];
ASPathName name = NULL;
doc = AVAppGetActiveDoc();

name = ASPathFromPlatformPath(
(void*)"c:\\test.ps");

if (name) {
     AVAlertNote("Printing Starts");
     memset(&myParams, 0, sizeof(AVDocPrintParamsRec));
     myParams.size = sizeof(AVDocPrintParamsRec);

     myParams.emitToFile = true;
     myParams.interactive = false;
     myParams.emitToPrinter = false;
     myParams.embedded = false;

     myParams.doColorSeparations = false;
     myParams.binaryOK = false;
     myParams.shrinkToFit = true;
     myParams.firstPage = -1L; /* should print all pages */
     myParams.lastPage = -1L;
     myParams.psLevel = 2L;

     myParams.fileSysName = ASAtomNull;
     myParams.filePathName = name;
     myParams.printerSpec = NULL;

     myParams.doColorSeparations = false;
     myParams.emitFileOption = kAVEmitFilePS;
     myParams.emitFontOption = kAVEmitFontEmbeddedFonts;
DURING
     AVDocPrintPagesWithParams(doc, &myParams);

HANDLER
     ASGetErrorString(ERRORCODE, buf, sizeof(buf));
     AVAlertNote(buf);
     return;
END_HANDLER
      AVAlertNote("Printing Ends");
      }
      else
      AVAlertNote("bad path name");
```

Example Two

```
void doPrint (AVDoc avdoc, char *psFileName, int pageSpec)
{
    PDDoc pddoc;
    AVDocPrintParamsRec params;
    ASPathName aspathname;
    PDPageRange *pageRangeArray;
    AVRect32 avrect32;
    ASCallback pageSetupCallback;

    pageRangeArray = (PDPageRange *)malloc (sizeof (PDPageRange));

    pddoc = AVDocGetPDDoc (avdoc);

    memset (&params, 0, sizeof (params));

    params.size = sizeof (params);

    params.cancelDialog = 0;
    params.psLevel = 2;
    params.binaryOK = false;
    params.shrinkToFit = false;
    params.fileSysName = (ASGetDefaultFileSys ())->getFileSysName ();

    aspathname = ASPathFromPlatformPath (psFileName);
    params.filePathName = aspathname;

    memset (&avrect32, 0, sizeof (avrect32));
    params.embeddedRect = avrect32;
    params.printerSpec = NULL;

    params.interactive = false;
    params.embedded = false;
    params.emitToPrinter = false;
    params.emitToFile = true;
    params.doColorSeparations = false;
    params.emitFileOption = kAVEmitFilePS;
    params.emitFontOption =
        kAVEmitFontAllFonts;
    params.emitFlags = 0;
    params.firstPage = pageRangeArray
        ->startPage = 0;
    params.lastPage = pageRangeArray
       ->endPage = PDDocGetNumPages (pddoc);
    pageRangeArray->pageSpec = pageSpec;
    params.ranges = pageRangeArray;
    params.numRanges = 1;
    params.TTasT42 = false;
    params.printAsImage = false;
    params.printerHasFarEastFonts = false;
```

```
params.reverse = false;
params.pageSpec = pageSpec;

 pageSetupCallback = ASCallbackCreateNotification
(PSPrintAfterBeginPageSetup, &callbackPSPrintAfterBeginPageSetup);
 AVAppRegisterNotification (PSPrintAfterBeginPageSetupNSEL,
gExtensionID, pageSetupCallback, (void*)(&params));

#ifdef WIN32
    UpdateWindow (gHWND);
#endif
    AVDocPrintPagesWithParams (avdoc, &params);
AVAppUnregisterNotification (PSPrintAfterBeginPageSetupNSEL,
gExtensionID, pageSetupCallback, (void*)(&params));

    free (pageRangeArray);

    ASFileSysReleasePath (ASGetDefaultFileSys (), aspathname);
}
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020002** or higher.

AVDocRegisterSelectionServer

```
ASBool AVDocRegisterSelectionServer
(AVDocSelectionServer server);
```

Description

Registers a new selection server with the Acrobat viewer. Selection servers allow the selection of items other than those that can be selected in the as-shipped Acrobat viewer. For example, a selection server could allow a user to select a sampled image.

This method can be used to replace an existing selection server that handles the same selection type.

Parameters

server	Structure containing the selection server's callback functions. This structure must **not** be freed after calling **AVDocRegisterSelectionServer**.

Return Value

Always returns **true**.

Exceptions

Raises **genErrBadParm** if **server** is **NULL**, if the **size** field in the **AVDocSelectionServerRec** is incorrect, or if the selection server's **AVDocSelectionGetTypeProc** is **NULL**.

Notifications

None

Header File

AVCalls.h

Related Methods

AVDocClearSelection
AVDocCopySelection
AVDocDeleteSelection
AVDocDoSelectionProperties
AVDocEnumSelection
AVDocGetSelection
AVDocShowSelection

Example

```
AVDocRegisterSelectionServer:
static AVDocSelectionServerRec mySelServer;

DrawImageSelectionCallback =
     ASCallbackCreateProto(
            AVPageViewDrawProc,
            &DrawImageSelection);
memset(&mySelServer, 0,
     sizeof(AVDocSelectionServerRec));
mySelServer.size =
     sizeof(AVDocSelectionServerRec);/*
            important for future */
mySelServer.GetType =
     ASCallbackCreateProto(
            AVDocSelectionGetTypeProc,
            &mySelServerGetType);
mySelServer.GettingSelection =
     ASCallbackCreateProto(
            AVDocSelectionGettingSelectionProc,
            &mySelServerGettingSelection);
mySelServer.LosingSelection =
     ASCallbackCreateProto(
            AVDocSelectionLosingSelectionProc,
            &mySelServerLosingSelection);
mySelServer.ShowSelection =
     ASCallbackCreateProto(
            AVDocSelectionShowSelectionProc,
            &mySelServerShowSelection);

AVDocRegisterSelectionServer(&mySelServer);
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVDocSelectionEnumPageRanges

```
void AVDocSelectionEnumPageRanges (AVDoc doc,
AVSelectionPageRangeEnumProc enumProc, void* clientData);
```

Description

Enumerates the pages on which there is a selection by calling the current selection server's **AVDocSelectionEnumPageRangesProc** callback.

This method allows determining which pages are currently involved in a selection, regardless of the selection type. This facilitates discovering whether a given point is in a selection or not.

Pages are enumerated in ascending order, and consecutive pages are grouped into a single page range.

Parameters

doc	The **AVDoc** from which to enumerate page ranges.
enumProc	User-supplied function that is called for each page on which there is a selection.
clientData	Pointer to user-supplied data to pass to **enumProc** each time it is called.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVDocEnumSelection

Example

```
AVDoc avDoc;
AVSelectionPageRangeEnumProc pageSelectionEnumeratorCB;

pageSelectionEnumeratorCB = ASCallbackCreateProto
(AVSelectionPageRangeEnumProc, pageSelectionEnumerator);
AVDocSelectionEnumPageRanges(avDoc, pageSelectionEnumeratorCB, void);
...

ACCB1 ASBool ACCB2 pageSelectionEnumerator (AVDoc doc, void* clientData,
ASInt32 firstPage, ASInt32 lastPage) {
     /* Some operations on each page range */
     ...
}
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

AVDocSendAuxData

```
ASBool AVDocSendAuxData (AVDoc avDoc, ASAtom auxDataType,
void* auxData, ASInt32 auxDataLen);
```

Description

Sends auxiliary data to an **AVDoc**. If an **AVAuxDataHandler** exists for the data type, the handler is called with **avDoc**, **auxDataType,** and **auxData**. The definition of the auxiliary data is dependent on the **AVAuxDataHandler**.

For any value of **auxDataType**, the **auxData** parameter must be predefined so that a user of this method knows what type of data to send. It is expected that the implementor of an **AVAuxDataHandler** provides this definition.

Parameters

avDoc	The target document.
auxDataType	The type of data being sent.
auxData	A pointer to the data.
auxDataLen	The length of the data.

Return Value

true if **auxData** was accepted by a handler, **false** otherwise.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVHasAuxDataHandler
AVRegisterAuxDataHandler

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020002** or higher.

AVDocSetClientName

```
void AVDocSetClientName (AVDoc avDoc, char* clientName);
```

Description

Sets the **AVDoc** client (container application) name. This method can be used by plug-ins that open documents in the viewer via DDE or Apple events. Most plug-ins will not open documents in this way, however, making this method unnecessary for most plug-ins.

Parameters

avDoc	The document whose client names is set.
clientName	The buffer from which the client name is read. May be up to 255 characters, and must be null-terminated.

Return Value

None

Exceptions

genErrNoMemory

Notifications

None

Header File

AVCalls.h

Related Methods

AVDocGetClientName

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020001** or higher.

AVDocSetDead

```
void AVDocSetDead (AVDoc doc, ASBool dead);
```

Description

Indicates the file stream for this document is terminated, although the **AVDoc** is still open. No more data can be read from this **AVDoc**.

AVDocs that are marked as dead may start returning **NULL** at anytime between the initial call to **AVDocSetDead** and the time that the **AVDoc** is actually closed. So callers of **AVDocGetAVWindow** and other **AVDoc** property methods must check for a **NULL** return value.

Parameters

doc	The document to set as dead.
dead	**true** if the document's file stream is terminated, **false** otherwise.

Return Value

None

Exceptions

None

Notifications

If **dead** is **true**, broadcasts **AVDocWantsToDie**.

Header File

AVCalls.h

Related Methods

AVDocClose

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020002** or higher.

AVDocSetReadOnly

```
void AVDocSetReadOnly (AVDoc doc, ASBool readOnly);
```

Description

Sets the read-only state of an **AVDoc**.

Parameters

doc	The **AVDoc** to set to read-only.
readOnly	**true** if the given document is set to read-only, **false** if it is set to read-write.

Return Value

None

Header File

AVCalls.h

Related Methods

AVDocIsReadOnly

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

AVDocSetSelection

```
ASBool AVDocSetSelection (AVDoc doc, ASAtom type, void* data,
ASBool highlight);
```

Description

Sets the document's current selection to the specified selection by calling the appropriate selection server's **AVDocSelectionGettingSelectionProc** callback. Clears the previous selection, if any, by calling the previous selection server's **AVDocSelectionLosingSelectionProc** callback.

Parameters

doc	The **AVDoc** in which the selection is set.
type	Selection type. Can be either a built-in type or one supported by a selection server added by a plug-in. Can be converted to an **ASAtom** using **ASAtomFromString**. See **Selection Types** for a list of the built-in selection types.
data	Data structure representing the selection. **data**'s type depends on what is passed in **type.** See **Selection Types** for a list of the data types for the built-in selection types.
highlight	Plug-ins should pass **true**, which tells the Acrobat viewer to highlight the selection because it has not already been highlighted. This only marks the highlighted regions of the display invalid, but does not immediately redraw the screen. Use **AVPageViewDrawNow** to force an immediate redraw if you wish.

Return Value

true if the selection was set successfully, **false** otherwise. Examples of why this method fails include:

- No selection server for **type**.
- Attempting to set the selection during link creation.

Exceptions

Only those exceptions raised by the previous selection server's **AVDocSelectionGettingSelectionProc**, and those raised by the new selection server's **AVDocSelectionGettingSelectionProc**.

Notifications

AVDocDidSetSelection

Header File

AVCalls.h

Related Methods

AVGrafSelectCreate
AVPageViewDrawNow
AVDocRegisterSelectionServer
AVDocClearSelection
AVDocDeleteSelection
AVDocDoSelectionProperties
AVDocEnumSelection
AVDocCopySelection
PDDocCreateTextSelect

Example

```
/* Select text */
PDTextSelect TextSelection;
HiliteEntry Hilite;

PDPage CurrentPDPage =
     PDDocAcquirePage(CurrentPDDoc, PageNum);
Hilite.offset= (ASUns16) Offset;
Hilite.length= 0;
TextSelection =
     PDTextSelectCreatePageHilite(
           CurrentPDPage, &Hilite, 1);
AVDocSetSelection(CurrentAVDoc,
     ASAtomFromString("Text"), (void *)
     TextSelection, true);
AVDocShowSelection(CurrentAVDoc);
PDPageRelease(CurrentPDPage);

/* select 0th link annot on 0th page
(assumes that it's a link) */
#define k_Annot
     ASAtomFromString("Annotation")
CosObj tmp;
PDAnnot annot, *annotSel;
PDAction action;

DURING
     PDDocAcquirePage(pdDoc, 0);  /* acquire
           0th page */
     annot = PDPageGetAnnot(pdPage, 0); /* get
           0th annot on pdPage */
     AnnotSel = ASmalloc(sizeof(PDAnnot));
     if(annotSel){
           tmp = PDActionGetCosObj(action);  /*
                 so we can copy its contents */
           *annotSel = tmp; /*copy the contents*/

           /* the selection server will ASfree
                 the pointer when done with
                 annotSel */
           AVDocSetSelection(avdoc, k_Annot,
                 &annotSel, true); }
     PDPageRelease(pdPage);
HANDLER
     if(pdPage)
      PDPageRelease(pdPage);
END_HANDLER
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVDocSetSplitterPosition

```
void AVDocSetSplitterPosition (AVDoc doc,
ASInt16 newPosition);
```

Description

Sets the splitter position. The splitter is the vertical division between the bookmark/thumbnail pane and the document pane. The default splitter location is saved in the Acrobat viewer's preferences file, and can be read/set using **AVAppGetPreference** and **AVAppSetPreference**.

Parameters

doc	The document whose splitter position is set.
newPosition	The new splitter position. This value specifies the width of the bookmark/thumbnail pane in pixels.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVDocGetSplitterPosition
AVAppSetPreference

Example

```
if(AVDocGetSplitterPosition(doc) < 72)
     AVDocSetSplitterPosition(doc, 72);
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVDocSetViewDef

```
void AVDocSetViewDef (AVDoc doc, AVDocViewDef viewDef);
```

Description

Sets the document's state to match the information in **viewDef**.

Parameters

doc	The document whose state is updated.
viewDef	A pointer to the structure that stores the state.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVDocGetViewDef

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020002** or higher.

AVDocSetViewMode

```
void AVDocSetViewMode (AVDoc doc, PDPageMode newMode);
```

Description

Sets the current view mode.

This method does nothing if the current view mode is full-screen, **PDFullScreen**. In this case, call **AVAppEndFullScreen** first.

Parameters

doc	The document whose view mode is set.
newMode	The view mode to set.

Return Value

None.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVAppEndFullScreen
AVDocGetViewMode

Example

```
if(AVDocGetViewMode(doc) == PDUseNone)
     AVDocSetViewMode(doc, PDUseBookmarks);
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVDocShowSelection

```
void AVDocShowSelection (AVDoc doc);
```

Description

Displays the current selection by calling the selection server's **AVDocSelectionShowSelectionProc** callback. Does nothing if the document has no selection or the current selection's server has no **AVDocSelectionShowSelectionProc** callback.

Parameters

doc	The document whose selection is shown.

Return Value

None

Exceptions

Only those raised by the selection server's **AVDocSelectionShowSelectionProc** callback.

Notifications

None

Header File

AVCalls.h

Related Methods

AVDocSetSelection
AVGrafSelectCreate
AVDocRegisterSelectionServer
PDDocCreateTextSelect
PDTextSelectCreatePageHilite
PDTextSelectCreateWordHilite

Example

```
PDTextSelect TextSelection;
HiliteEntry Hilite;
PDPage CurrentPDPage = PDDocAcquirePage(
     CurrentPDDoc, PageNum);
Hilite.offset= (ASUns16) Offset;
Hilite.length= 0;
TextSelection =
     PDTextSelectCreatePageHilite(
           CurrentPDPage, &Hilite, 1);
AVDocSetSelection(CurrentAVDoc,
     ASAtomFromString("Text"), (void *)
           TextSelection, true);
if(show)
     AVDocShowSelection(CurrentAVDoc);
else
     AVDocClearSelection(CurrentAVDoc, true);
PDPageRelease(CurrentPDPage);
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVGrafSelect

AVGrafSelectCreate

```
AVGrafSelect AVGrafSelectCreate (AVPageView pageView,
const ASFixedRectP selRect);
```

Description

Creates a graphics selection. After creation, the selection can be set using **AVDocSetSelection**.

Parameters

pageView	The **AVPageView** in which a graphics selection is created.
selRect	Pointer to the **ASFixedRect** bounding the region from which a graphics selection is created, specified in user space coordinates.

Return Value

The newly-created **AVGrafSelect**, or **NULL** if **selRect** is **NULL** or is an empty rectangle.

Exceptions

genErrBadParm
genErrNoMemory

Notifications

None

Header File

AVCalls.h

Related Methods

AVGrafSelectDestroy
AVDocSetSelection

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVGrafSelectDestroy

```
void AVGrafSelectDestroy (AVGrafSelect avGraf);
```

Description

Destroys a graphics selection. Use this method to destroy the selection only if you have *not* called **AVDocSetSelection** with it. If the selection has been set by a call to **AVDocSetSelection**, it will automatically be destroyed by a call to **AVDocClearSelection** or the next call to **AVDocSetSelection**.

Parameters

avGraf	The graphics selection to destroy.

Return Value

None

Exceptions

genErrBadParm

Notifications

None

Header File

AVCalls.h

Related Methods

AVGrafSelectCreate

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVGrafSelectGetBoundingRect

```
void AVGrafSelectGetBoundingRect (AVGrafSelect avGraf,
ASFixedRect* boundRectP);
```

Description

Gets the specified graphics selection's bounding rectangle.

Parameters

avGraf	The graphics selection whose bounding rectangle is obtained.
boundRectP	Pointer to the graphics selection's bounding rectangle, specified in user space coordinates.

Return Value

None

Exceptions

genErrBadParm

Notifications

None

Header File

AVCalls.h

Related Methods

AVGrafSelectCreate

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVMenu

AVMenuAcquire

```
AVMenu AVMenuAcquire (AVMenu menu);
```

Description

Acquires the specified menu. Increments the menu's reference count. When you are done using the menu item, release it using **AVMenuRelease.**

Parameters

menu	The menu to acquire.

Return Value

The menu acquired.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVMenubarAcquireMenuByIndex
AVMenubarAcquireMenuByName
AVMenubarAcquireMenuItemByPredicate
AVMenuRelease
AVMenuNew

Example

```
AVMenu tempMenu;
ASInt32 i;

for(i=0;i< AVMenubarGetNumMenus(
     AVAppGetMenuBar());i++)
{
     tempMenu = AVMenubarAcquireMenuByIndex(
          AVAppGetMenuBar(), i);
     if(AVMenuGetName(tempMenu) ==
          ASAtomFromString("Edit"))
     AVMenuRemove(tempMenu);
     break;
}
AVMenuRelease(tempMenu);
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVMenuAcquireMenuItemByIndex

```
AVMenuItem AVMenuAcquireMenuItemByIndex (AVMenu menu,
ASInt32 menuItemIndex);
```

Description

Acquires the menu item at the specified location in the specified menu. When you are done using the menu item, release it using **AVMenuItemRelease.** Menu item indices are generally not reliable—they change as plug-ins add, remove, or rearrange menu items, and may differ in different versions of the Acrobat viewer (if menu items are rearranged, removed, or added). Menu items should generally be acquired using **AVMenubarAcquireMenuItemByName**, which is generally reliable.

Parameters

menu	The menu in which a menu item is acquired.
menuItemIndex	The index of the menu item in **menu** to acquire. The first item in a menu has an index of zero. Even if the Acrobat viewer is displaying short menus, the index includes any intervening long-mode-only menu items (irrelevant for Acrobat 3.0 or later since there are no short menus).

Return Value

The menu item whose index is specified. Returns **NULL** if **menu** is **NULL**, if the index is less than zero, or the index is greater than the number of menu items in the menu.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVMenuGetNumMenuItems
AVMenubarAcquireMenuItemByPredicate
AVMenubarAcquireMenuItemByName
AVMenuItemAcquire
AVMenuItemRelease

Example

```
AVMenuItem tempItem;
ASInt32 i;

for(i=0;i< AVMenuGetNumMenuItems(
     editMenu); i++)
{
     tempItem =
           AVMenuAcquireMenuItemByIndex(
                 editMenu, i);
     AVMenuItemGetTitle(tempItem, buf,
           sizeof(buf));
     if(!strcmp(buf, "Paste"))
           AVMenuItemSetTitle(tempItem, "Glue");
}
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVMenuAddMenuItem

```
void AVMenuAddMenuItem (AVMenu menu, AVMenuItem menuItem,
ASInt32 menuItemIndex);
```

Description

Inserts a menu item in the specified location in a menu, and acquires the menu item. Does nothing if the menu is **NULL**, if the menu item is **NULL**, or the menu item is already in a menu.

Parameters

menu	The menu to which a menu item is added.
menuItem	The menu item to add.
menuItemIndex	The location in **menu** to add **menuItem**. The first item in a menu has an index of zero. Even if the Acrobat viewer is displaying short menus, the index includes any intervening long-mode-only menu items (irrelevant for Acrobat 3.0 or later since there are no short menus). Pass **APPEND_MENUITEM** (see AVExpT.h) to append the menu item to the end of the menu.

Return Value

None

Exceptions

genErrNoMemory

Notifications

None

Header File

AVCalls.h

Related Methods

AVMenuItemRemove

Example

```
myButtonMenuItem =
     AVMenubarAcquireMenuItemByName(menubar,
     "Hello");
helloIndex = AVMenuGetMenuItemIndex(menu,
     myButtonMenuItem);
AVMenuAddMenuItem(menu, notesMenuItem,
     helloIndex+1);
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVMenuGetMenuItemIndex

```
ASInt32 AVMenuGetMenuItemIndex (AVMenu menu,
AVMenuItem menuItem);
```

Description

Gets the index of the specified menu item in the specified menu.

Indices must be used with caution, because they change as plug-ins add, remove, or rearrange menu items.

Parameters

menu	The menu in which **menuItem** is located.
menuItem	The menu item whose index is obtained.

Return Value

The index of **menuItem** in **menu.** The first item in a menu has an index of zero. Even if the Acrobat viewer is displaying short menus, the index includes any intervening long-mode-only menu items (irrelevant for Acrobat 3.0 or later since there are no short menus).

Returns **BAD_MENUITEM_INDEX** (see AVExpT.h) if **menuItem** is not in **menu**. Also returns **BAD_MENUITEM_INDEX** if **menu** is **NULL** or **menuItem** is **NULL.**

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVMenuGetNumMenuItems

Example

```
myButtonMenuItem =
     AVMenubarAcquireMenuItemByName(menubar,
           "Hello");
helloIndex = AVMenuGetMenuItemIndex(menu,
     myButtonMenuItem);
AVMenuAddMenuItem(menu, notesMenuItem,
     helloIndex+1);
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVMenuGetName

```
ASAtom AVMenuGetName (AVMenu menu);
```

Description

Gets the **ASAtom** for the menu's language-independent name.

Parameters

menu	The menu whose language-independent name is obtained.

Return Value

The menu's name. The **ASAtom** can be converted to a string using **ASAtomGetString**. Returns **NULL** if **menu** is **NULL**.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVMenuAcquire
AVMenuGetTitle
AVMenuNew

Example

```
AVMenu tempMenu;
ASInt32 i;

for(i=0;i< AVMenubarGetNumMenus(
     AVAppGetMenuBar());i++){
     tempMenu =
            AVMenubarAcquireMenuByIndex(
                  AVAppGetMenuBar(), i);
     if(AVMenuGetName(tempMenu) ==
            ASAtomFromString("Edit"))
            {
                  AVMenuRemove(tempMenu);
                  break;
            }
}
AVMenuRelease(tempMenu);
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVMenuGetNumMenuItems

```
ASInt32 AVMenuGetNumMenuItems (AVMenu menu);
```

Description

Gets the number of menu items in a menu, including those that are visible only in long-menus mode.

Parameters

menu	The menu for which the number of menu items is obtained.

Return Value

The number of menu items in the specified menu. Returns 0 if **menu** is **NULL.**

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVMenuAcquireMenuItemByIndex

Example

```
if (AVMenuGetNumMenuItems(myMenu)){
     /* nonzero means process it */
}
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVMenuGetParentMenubar

```
AVMenubar AVMenuGetParentMenubar (AVMenu menu);
```

Description

Gets the parent menubar for the specified menu.

Parameters

menu	The menu whose parent menubar is obtained.

Return Value

The menubar to which the menu is attached. Returns **NULL** if the menu has not yet been added to the menubar or if the menu is a submenu.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVMenuGetParentMenuItem
AVMenubarGetMenuIndex
AVMenuItemGetParentMenu

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVMenuGetParentMenuItem

```
AVMenuItem AVMenuGetParentMenuItem (AVMenu menu);
```

Description

Gets the parent menu item for the specified menu.

Parameters

menu	The menu whose parent menu item is obtained.

Return Value

The menu item for which the specified menu is a submenu. Returns **NULL** if the specified menu is not a submenu.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVMenuGetParentMenubar
AVMenubarGetMenuIndex
AVMenuItemGetParentMenu

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVMenuGetTitle

```
ASInt32 AVMenuGetTitle (AVMenu menu, char* buffer,
ASInt32 bufferSize);
```

Description

Gets the menu's title as it appears in the user interface. The length of the title remains **0** if menu is **NULL.**

Parameters

menu	The menu whose title is obtained.
buffer	*(Filled by the method)* The buffer into which the title is copied. If **buffer** is **NULL**, it is not filled but the length of the title is still returned.
bufferSize	The maximum number of characters the buffer can hold.

Return Value

If **menu** is nonzero, returns the length of the title. If **menu** is **NULL** and **buffer** is not, **buffer** is zero-ed. Returns **0** if **buffer** is **NULL**.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVMenuGetName
AVMenuItemGetTitle

Example

```
AVMenu tempMenu;
ASInt32 i;

for(i=0;i< AVMenubarGetNumMenus(
     AVAppGetMenuBar());i++){
     tempMenu = AVMenubarAcquireMenuByIndex(
            AVAppGetMenuBar(), i);
     AVMenuGetTitle(tempMenu, buf,
            sizeof(buf));
     if(!strcmp(buf, "Edit")){
            AVMenuSetTitle(tempMenu, "Change");
            AVMenuRelease(tempMenu);
            break;
     }
     AVMenuRelease(tempMenu);
}
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVMenuIsHiddenOnMenubar

```
ASBool AVMenuIsHiddenOnMenubar (AVMenu menu);
```

Description

Tests whether a menu is hidden on the menubar.

Parameters

menu	The menu to test.

Return Value

true if menu is hidden, **false** otherwise.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVMenubarAddHiddenMenu

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

AVMenuNew

```
AVMenu AVMenuNew (const char* title, const char* name,
ASExtension owner);
```

Description

Creates and acquires a new menu with the given title and language-independent name. The menu can be added to the menubar using **AVMenubarAddMenu**. When you are done using the menu, release it using **AVMenuRelease**.

Parameters

title	The string that appears in the user interface. In Windows, an ampersand (&) character in the string results in underlining the character after it on the menu.
name	Language-independent name of the menu to create. This is the value returned by **AVMenuGetName**. **name** must *not* contain any spaces. Plug-in developers should prefix the names of menus they add with the name of their plug-in and a colon, to avoid collisions in the menu name space. For example, a plug-in named **myPlug** might add menus named **myPlug:DrawTools** and **myPlug:Checkout**.
owner	The **gExtensionID** extension registering the menu.

Return Value

The newly-created menu.

Exceptions

genErrNoMemory

Notifications

None

Header File

AVCalls.h

Related Methods

AVMenuRelease
AVMenubarAddMenu
AVMenuGetName

Example

```
AVMenu notesMenu;

notesMenu = AVMenuNew("Notes", "NewNotes",
     gExtensionID);
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVMenuRelease

```
void AVMenuRelease (AVMenu menu);
```

Description

Releases the specified menu. Decrements the reference count and automatically destroys the menu when its reference count is zero.

Parameters

menu	The menu to release.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVMenuAcquire
AVMenuNew

Example

```
AVMenu tempMenu;
ASInt32 i;

for(i=0;i< AVMenubarGetNumMenus(
     AVAppGetMenuBar());i++)
{
     tempMenu = AVMenubarAcquireMenuByIndex(
          AVAppGetMenuBar(), i);
     if(AVMenuGetName(tempMenu) ==
          ASAtomFromString("Edit"))
     AVMenuRemove(tempMenu);
     break;
}
AVMenuRelease(tempMenu);
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to 0x00020000 or higher.

AVMenuRemove

```
void AVMenuRemove (AVMenu menu);
```

Description

Removes a menu from the menubar and releases it. If the menu is a submenu, this method does nothing.

Parameters

menu	The menu to remove.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVMenuItemRemove
AVMenuRelease

Example

```
AVMenu tempMenu;
ASInt32 i;

for(i=0;i< AVMenubarGetNumMenus(
     AVAppGetMenuBar());i++){
     tempMenu =
            AVMenubarAcquireMenuByIndex(
                  AVAppGetMenuBar(), i);
     if(AVMenuGetName(tempMenu) ==
            ASAtomFromString("Edit")) {
            AVMenuRemove(tempMenu);
            break;
     }
     AVMenuRelease(tempMenu);
}
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVMenubar

AVMenubarAcquireMenuByIndex

```
AVMenu AVMenubarAcquireMenuByIndex (AVMenubar menubar,
ASInt32 menuIndex);
```

Description

Acquires the menu with the specified index. Menu indices are generally not reliable—they change as plug-ins add, remove, or rearrange menus, and may differ in different versions of the Acrobat viewer (if menus are rearranged, removed, or added). Menus should generally be acquired using **AVMenubarAcquireMenuByName**, which is generally reliable.

Parameters

menubar	The menubar in which the menu is located.
menuIndex	The index (in **menubar**) of the menu to acquire.

Return Value

The menu with the specified index. Returns **NULL** if no such menu or if **menubar** is **NULL**.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVMenubarAcquireMenuByName
AVMenubarAcquireMenuByPredicate
AVAppGetMenubar
AVMenuRelease

Example

```
AVMenu fileMenu;

fileMenu = AVMenubarAcquireMenuByIndex(
     AVAppGetMenuBar(), 1);
if(AVMenubarGetMenuIndex(fileMenu) != 1)
     AVAlertNote("Odd.");
AVMenuRelease(fileMenu);
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVMenubarAcquireMenuByName

```
AVMenu AVMenubarAcquireMenuByName (AVMenubar menubar,
const char* name);
```

Description

Acquires the menu or submenu that has the specified language-independent menu name (case-sensitive). When you are done using the menu, release it using **AVMenuRelease**. Acquiring a menu by name is generally reliable, because names (unlike indices) do not change as menus are added or rearranged.

Parameters

menubar	The menubar in which the menu item is located.
name	The language-independent name of the menu to acquire. See **Menu Item Names** for a list of the names of the built-in menus in Acrobat.

Return Value

The menu with the specified name.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVAppGetMenubar
AVMenuRelease
AVMenubarAcquireMenuItemByPredicate
AVMenubarAcquireMenuByIndex

Example

```
menu = AVMenubarAcquireMenuByName(menubar,
     "Tools");
if (menu){
     myButtonMenuItem = AVMenuItemNew(...);
     ...
     AVMenuRelease(menu);
}
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVMenubarAcquireMenuByPredicate

```
AVMenu AVMenubarAcquireMenuByPredicate (AVMenubar menubar,
AVMenuPredicate predicate, void* clientData);
```

Description

Acquires a menu using a user-supplied selection routine. This method can also be used to enumerate all menus. When you are done using the menu that is acquired, release it using **AVMenuRelease**.

Parameters

menubar	The menubar containing the menu to acquire.
predicate	User-supplied **AVMenuPredicate** function that determines which menu is acquired. Menus are searched depth-first. The first menu for which **predicate** returns **true** is acquired. If **predicate** always returns **false**, all menus will be enumerated.
clientData	Pointer to user-supplied data to pass to **predicate** each time it is called.

Return Value

The first menu for which **predicate** returned **true**. Returns **NULL** if **predicate** never returned **true** or if **menubar** is **NULL**.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVMenuRelease
AVMenubarAcquireMenuByName
AVMenubarAcquireMenuByIndex
AVAppGetMenubar

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVMenubarAcquireMenuItemByName

```
AVMenuItem AVMenubarAcquireMenuItemByName (AVMenubar menubar,
const char* name);
```

Description

Acquires the menu item with the specified language-independent menu item name (case-sensitive). This method automatically searches all menus and submenus. When you are done using the menu item, release it using **AVMenuItemRelease**. Acquiring a menu item by name is generally reliable, because names (unlike indices) do not change as menus items are added or rearranged.

Parameters

menubar	The menubar in which the menu item is located.
name	The language-independent name of the menu item to acquire. See the **Menu Item Names** tables for the language-independent names of the menu items built into Reader and Acrobat. The language-independent names of menu items added by Adobe plug-ins are described in the technical notes for those plug-ins.

Return Value

The menu item with the specified name. Returns **NULL** if no such menu item exists, if **menubar** is **NULL**, or if **name** is **NULL**.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVAppGetMenubar
AVMenuItemRelease
AVMenubarAcquireMenuItemByPredicate
AVMenuAcquireMenuItemByIndex

Example

```
myButtonMenuItem =
     AVMenubarAcquireMenuItemByName(menubar,
     "Hello");
helloIndex = AVMenuGetMenuItemIndex(menu,
     myButtonMenuItem);
AVMenuAddMenuItem(menu, notesMenuItem,
     helloIndex+1);
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVMenubarAcquireMenuItemByPredicate

```
AVMenuItem AVMenubarAcquireMenuItemByPredicate
(AVMenubar menubar, AVMenuItemPredicate predicate,
void* clientData);
```

Description

Acquires a menu item using a user-supplied selection routine. This method may also be used to enumerate all menu items. When you are done using the menu item that is acquired, release it using **AVMenuItemRelease**.

Parameters

menubar	The menubar containing the menu to acquire.
predicate	User-supplied function that determines which menu item is acquired. Menus items are searched depth-first. The first menu item for which **predicate** returns **true** is acquired. If **predicate** always returns **false**, all menu items will be enumerated.
clientData	Pointer to user-supplied data to pass to **predicate** each time it is called.

Return Value

The first menu item for which **predicate** returned **true**. Returns **NULL** if predicate never returns **true** or if **menubar** is **NULL**.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVMenuItemRelease
AVMenubarAcquireMenuByName
AVMenuAcquireMenuItemByIndex
AVAppGetMenubar

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVMenubarAddHiddenMenu

```
void AVMenubarAddHiddenMenu (AVMenubar menubar, AVMenu menu);
```

Description

Inserts a hidden menu into the menubar. Does nothing if **menubar** is **NULL** or **menu** is **NULL.**

Parameters

menubar	The menubar into which **menu** is added.
menu	The menu to add to **menubar**.

Return Value

None

Exceptions

genErrNoMemory

Notifications

None

Header File

AVCalls.h

Related Methods

AVMenuIsHiddenOnMenubar
AVMenubarAddMenu
AVMenuNew
AVMenuRemove

Example

```
AVMenu hiddenNotesMenu;

hiddenNotesMenu = AVMenuNew("Notes", "NewNotes", gExtensionID);
AVMenubarAddHiddenMenu(AVAppGetMenuBar(),
     hiddenNotesMenu);
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

AVMenubarAddMenu

```
void AVMenubarAddMenu (AVMenubar menubar, AVMenu menu,
ASInt32 menuIndex);
```

Description

Inserts a menu into the menubar. Does nothing if **menubar** is **NULL** or **menu** is **NULL.**

Parameters

menubar	The menubar into which **menu** is added.
menu	The menu to add to **menubar**.
menuIndex	The position at which the menu is added. The left-most menu in a menubar has an index of zero. Passing a value of **APPEND_MENU** (see AVExpT.h.) adds the menu to the end of the menubar.

Return Value

None

Exceptions

genErrNoMemory

Notifications

None

Header File

AVCalls.h

Related Methods

AVMenuNew
AVMenuRemove
AVMenubarAddHiddenMenu

Example

```
AVMenu notesMenu;

notesMenu = AVMenuNew("Notes", "NewNotes",
     gExtensionID);
AVMenubarAddMenu(AVAppGetMenuBar(),
     notesMenu, 3);
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVMenubarGetMenuIndex

```
ASInt32 AVMenubarGetMenuIndex (AVMenubar menubar,
AVMenu menu);
```

Description

Gets the index of the specified menu in the menubar.

Parameters

menubar	The menubar in which **menu** is located.
menu	The menu whose index is obtained.

Return Value

The specified menu's index. Returns **BAD_MENU_INDEX** if the menu is not in the menubar, is a submenu, if **menubar** is **NULL**, or if **menu** is **NULL.**

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVAppGetMenubar

Example

```
AVMenu fileMenu;
fileMenu = AVMenubarAcquireMenuByIndex(
     AVAppGetMenuBar(), 1);
if(AVMenubarGetMenuIndex(fileMenu) != 1)
     AVAlertNote("Odd.");
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVMenubarGetNumMenus

```
ASInt32 AVMenubarGetNumMenus (AVMenubar menubar);
```

Description

Gets the number of menus in **menubar.**

Parameters

menubar	The menubar for which the number of menus is obtained.

Return Value

The number of menus in the menubar, not including submenus. Returns **0** if **menubar** is **NULL**.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVAppGetMenubar
AVMenubarAcquireMenuByIndex

Example

```
AVMenubar bar = AVAppGetMenubar();
ASInt32 numMenus = AVMenubarGetNumMenus(bar);
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVMenubarHide

```
void AVMenubarHide (AVMenubar menubar);
```

Description

Hides the menubar.

Parameters

menubar	The menubar to hide.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVMenubarShow
AVAppGetMenubar

Example

```
AVMenubarHide(AVAppGetMenubar());
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVMenubarShow

```
void AVMenubarShow (AVMenubar menubar);
```

Description

Shows the menubar.

Parameters

menubar	The menubar to show.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVMenubarHide
AVAppGetMenubar

Example

```
AVMenubarShow(AVAppGetMenubar());
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVMenuItem

AVMenuItemAcquire

```
AVMenuItem AVMenuItemAcquire (AVMenuItem menuItem);
```

Description

Acquires a menu item. Increments the menu item's reference count.

Parameters

menuItem	The menu item to acquire.

Return Value

The menu item acquired.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVMenuItemRelease
AVMenubarAcquireMenuItemByPredicate
AVMenubarAcquireMenuItemByName
AVMenuAcquireMenuItemByIndex

Example

```
AVMenuItem tempItem;
ASInt32 i;

for(i=0;i< AVMenuGetNumMenuItems(
     editMenu);i++){
     tempItem = AVMenuAcquireMenuItemByIndex(
            editMenu, i);
     if(ASAtomFromString("Paste") ==
            AVMenuItemGetName(tempItem)){
            AVMenuItemRemove(tempItem);
            break;
     }
     AVMenuItemRelease(tempItem);
}
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVMenuItemAcquireSubmenu

```
AVMenu AVMenuItemAcquireSubmenu (AVMenuItem menuItem);
```

Description

Acquires the submenu attached to the specified menu item, if there is one. When you are done with the submenu, release it using **AVMenuRelease**.

Parameters

menuItem	The menu items whose submenu is obtained.

Return Value

The specified menu item's submenu. Returns **NULL** if **menuItem** is **NULL** or if **menuItem** does not have a submenu.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVMenuAcquire
AVMenuRelease

Example

```
AVMenuItem tempItem;
AVMenu prefsMenu;
ASInt32 i;
buf[20];

for(i=0;i< AVMenuGetNumMenuItems(
     editMenu);i++){
     tempItem =
            AVMenuAcquireMenuItemByIndex(
                  editMenu, i);
     AVMenuItemGetTitle(tempItem, buf,
            sizeof(buf));
     if(!strcmp(buf, "Preferences"))
            break;
     AVMenuItemRelease(tempItem);
}
prefsMenu = AVMenuItemAcquireSubmenu(
     tempItem);
/* now add items to prefsMenu */
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVMenuItemExecute

```
void AVMenuItemExecute (AVMenuItem menuItem);
```

Description

Executes a menu item's **AVExecuteProc**. Does nothing if **menuItem** is **NULL**, if **menuItem** has no **AVExecuteProc**, or if **menuItem** is not enabled.

You cannot execute a menu item that has a submenu (for example, the "Pages" menu item in the Edit menu).

Parameters

menuItem	The menu item to execute.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVMenuItemSetExecuteProc
AVMenuItemIsEnabled

Example

```
AVMenuItem oldItem;
...
if(oldItem)
     AVMenuItemExecute(oldItem);
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to 0x00020000 or higher.

AVMenuItemGetLongOnly

```
ASBool AVMenuItemGetLongOnly (AVMenuItem menuItem);
```

Description

Gets the flag indicating whether a menu item is visible only in long-menus mode. In Acrobat 3.0 and later, this is irrelevant, since there is no long/short menus option.

Parameters

menuItem	The menu item whose flag is obtained.

Return Value

true if the menu item is visible only in long-menus mode. **false** if the menu item is visible in both long and short menus, or if **menuItem** is **NULL.**

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

None

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVMenuItemGetName

```
ASAtom AVMenuItemGetName (AVMenuItem menuItem);
```

Description

Gets the atom for the language-independent name of the menu item.

Parameters

menuItem	The menu item whose language-independent name is obtained.

Return Value

The **ASAtom** corresponding to the name of the specified menu item, or **ASAtomNull** if **menuItem** is **NULL.** The **ASAtom** can be converted to a string using **ASAtomGetString**.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVMenuItemGetTitle

Example

```
AVMenuItem tempItem;
ASInt32 i;

for(i=0;i< AVMenuGetNumMenuItems(
     editMenu);i++){
     tempItem =
            AVMenuAcquireMenuItemByIndex(
                  editMenu, i);
     if(ASAtomFromString("Paste") ==
            AVMenuItemGetName(tempItem)){
            AVMenuItemSetTitle(tempItem, "Glue");
            AVMenuItemRelease(tempItem);
            break;
     }
     AVMenuItemRelease(tempItem);
}
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVMenuItemGetParentMenu

```
AVMenu AVMenuItemGetParentMenu (AVMenuItem menuItem);
```

Description

Gets the menu in which the specified menu item appears.

Parameters

menuItem	The menu item whose parent menu is obtained.

Return Value

The menu in which the specified menu item appears. Returns **NULL** if this menu item is not in a menu.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVMenuGetParentMenuItem
AVMenuItemAcquireSubmenu

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVMenuItemGetShortcut

```
ASBool AVMenuItemGetShortcut (AVMenuItem menuItem, char* key,
ASInt16* flags);
```

Description

Gets the shortcut key for the specified menu item.

Parameters

menuItem	The menu item whose shortcut is obtained.
key	*(Filled by the method)* The key that is a shortcut for the menu item, an ASCII character. The value **NO_SHORTCUT** (see AVExpT.h) indicates that the menu item has no shortcut.
flags	*(Filled by the method)* Modifier keys, if any, used as part of the shortcut. Must be an OR of the **Modifier Keys** values, except that **AV_COMMAND** will never be present.

Return Value

true if **menuItem** is not **NULL** and **menuItem** has a shortcut, **false** otherwise.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVMenuItemNew

Example

```
AVMenuItem item;
ASInt16 flags;
char* key;
if(AVMenuItemGetShortcut(item, key,
     &flags))
     AVAlertNote("shortcut exists");
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to 0x00020000 or higher.

AVMenuItemGetTitle

```
ASInt32 AVMenuItemGetTitle (AVMenuItem menuItem, char* buffer,
ASInt32 bufferSize);
```

Description

Gets a menu item's title, which is the string that appears in the user interface.

Parameters

menuItem	The menu item whose title is obtained.
buffer	*(Filled by the method)* A buffer to hold the null-terminated name. If **title** is **NULL,** returns the length of the menu item's name, but does not fill the buffer.
bufferSize	The maximum number of characters that can be placed into **title**. If the name is longer than this, only the first **bufferSize** – 1 characters are placed into **buffer**, and the buffer is null-terminated.

Return Value

The length of the title. Returns **0** if **menuItem** is **NULL**.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVMenuItemSetTitle
AVMenuItemGetName

Example

```
AVMenuItem tempItem;
ASInt32 i;
buf[20];

for(i=0;i< AVMenuGetNumMenuItems(
     editMenu);i++){
     tempItem =
           AVMenuAcquireMenuItemByIndex(
                 editMenu, i);
     AVMenuItemGetTitle(tempItem, buf,
           sizeof(buf));
     if(!strcmp(buf, "Paste"))
           AVMenuItemSetTitle(tempItem, "Glue");
     AVMenuItemRelease(tempItem);
}
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVMenuItemIsEnabled

```
ASBool AVMenuItemIsEnabled (AVMenuItem menuItem);
```

Description

Tests whether or not the specified menu item is enabled.

Parameters

menuItem	The menu item whose enabled flag is obtained.

Return Value

true if **menuItem** is enabled, if **menuItem** is **NULL**, or if **menuItem** has no **AVComputeEnabledProc.**

false if the menu item is disabled or its **AVComputeEnabledProc** raises an exception.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVMenuItemSetComputeEnabledProc

Example

```
if(AVMenuItemIsEnabled(item)
     AVMenuItemExecute(Item);
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVMenuItemIsMarked

```
ASBool AVMenuItemIsMarked (AVMenuItem menuItem);
```

Description

Tests whether or not **menuItem** is marked (for example, appears with a check mark).

Parameters

menuItem	The menu item whose marked state is obtained.

Return Value

true if **menuItem** is marked. **false** if **menuItem** is **NULL**, if the menu item does not have an **AVComputeMarkedProc**, or if it raises an exception.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVMenuItemSetComputeMarkedProc

Example

```
if (AVMenuItemIsMarked(item))
     AVMenuItemExecute(item);
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVMenuItemNew

```
AVMenuItem AVMenuItemNew (const char* title, const char* name,
AVMenu submenu, ASBool longMenusOnly, char shortcut,
ASInt16 flags, AVIcon icon, ASExtension owner);
```

Description

Creates and acquires a new **AVMenuItem**. The menu item can be added to a menu using **AVMenuAddMenuItem**.

Release the **AVMenuItem** using **AVMenuItemRelease** after it has been added to a menu.

Parameters

title	The string shown in the user interface for this menu item. Use a hyphen to create a separator menu item. This value is also returned by **AVMenuItemGetTitle**. In Windows, an ampersand (&) character in the string results in underlining the character after it on the menu item.
name	The language-independent name of the menu item to create. This is the value returned by **AVMenuItemGetName**. **name** must *not* contain any spaces. Plug-in developers should prefix the names of menu items they add with the name of their plug-in and a colon, to avoid collisions in the menu item name space. For example, a plug-in named **myPlug** might add menu items named **myPlug:Scan** and **myPlug:Find**.
submenu	Submenu (if any) for which this menu item is the parent. Pass **NULL** if this menu item does not have a submenu.
longMenusOnly	*(Ignored in Acrobat 3.0 or later)* If *true*, the menu item is visible only when the user selects “Full Menus.” If *false*, the menu item is visible for both “Full Menus” and “Short Menus” modes.
shortcut	The key to use as a shortcut for the menu item, an ASCII character. Use **NO_SHORTCUT** (see AVExpT.h) if the menu item has no shortcut. The Acrobat viewer does not check for conflicts between shortcuts. The consequences of multiple menu items having the same shortcut is undefined. In Windows, the shortcut is not displayed for any menu item that also has an **icon**, although the shortcut will work.
flags	Modifier keys, if any, used as part of the shortcut. Must be an OR of the **Modifier Keys** values, except that **AV_COMMAND** cannot be specified.

icon	The icon to show in the menu item, or **NULL** if no icon is shown. In Mac OS, **icon** is a handle to a standard **SICN** resource. In Windows, **icon** is a 24×24 sample monochrome **HBITMAP**.
owner	The **gExtensionID** extension registering the menu item.

Return Value

The newly-created menu item.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVMenuAddMenuItem
AVMenuItemRelease

Example

```
ASCallback doHelloAlertCallback;
AVMenuItem myButtonMenuItem;

doHelloAlertCallback =
     ASCallbackCreateProto(AVExecuteProc,
           &doHelloAlert);
/* shortcut is CTRL-SHIFT-H */
myButtonMenuItem = AVMenuItemNew(
     "&Hello World", "Hello", NULL, false,
     “H”, AV_CONTROL || AV_SHIFT, NULL,
     gExtensionID);
AVMenuItemSetExecuteProc(myButtonMenuItem,
     doHelloAlertCallback, NULL);
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVMenuItemRelease

```
void AVMenuItemRelease (AVMenuItem menuItem);
```

Description

Releases a menu item. Decrements the reference count and destroys the menu item if the count is zero.

Parameters

menuItem	The menu item to release.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVMenuItemAcquire
AVMenubarAcquireMenuItemByPredicate
AVMenubarAcquireMenuItemByName
AVMenuAcquireMenuItemByIndex

Example

```
AVMenuItem tempItem;
ASInt32 i;

for(i=0;i< AVMenuGetNumMenuItems(editMenu)
     ;i++){
     tempItem =
            AVMenuAcquireMenuItemByIndex(
                  editMenu, i);
     if(ASAtomFromString("Paste") ==
            AVMenuItemGetName(tempItem)){
            AVMenuItemRemove(tempItem);
            break;
     }
     AVMenuItemRelease(tempItem);
}
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVMenuItemRemove

```
void AVMenuItemRemove (AVMenuItem menuItem);
```

Description

Removes a menu item from the menu hierarchy and releases it. Does nothing if **menuItem** is **NULL**.

Keyboard accelerators for the Acrobat viewer's built-in menu items will always work, even if the menu item is removed.

Parameters

menuItem	The menu item to remove.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVMenuItemAcquire
AVMenuItemRelease

Example

```
ASInt32 i;

for(i=0;i< AVMenuGetNumMenuItems(
     editMenu);i++){
     tempItem = AVMenuAcquireMenuItemByIndex(
            editMenu, i);
     if(ASAtomFromString("Paste") ==
            AVMenuItemGetName(tempItem)){
            AVMenuItemRemove(tempItem);
            break;
     }
     AVMenuItemRelease(tempItem);
}
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVMenuItemSetComputeEnabledProc

```
void AVMenuItemSetComputeEnabledProc (AVMenuItem menuItem,
AVComputeEnabledProc proc, void* data);
```

Description

Sets the user-supplied procedure to call to determine whether or not the menu item is enabled. Does nothing if **menuItem** is **NULL.**

Parameters

menuItem	The menu item whose **AVComputeEnabledProc** is set.
proc	User-supplied callback to call whenever the Acrobat viewer needs to know whether or not **menuItem** should be enabled.
data	Pointer to user-supplied data to pass to **proc** each time it is called**.**

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVMenuItemIsEnabled
AVMenuItemSetComputeMarkedProc
AVMenuItemSetExecuteProc

Example

```
ASCallback pDocExistEnableCallback; //Will hold ptr to callback
AVMenuItem myButtonMenuItem;

pDocExistEnableCallback =
     ASCallbackCreateProto(AVComputeEnabledProc,
           DocExistEnableCallback);
myButtonMenuItem = AVMenuItemNew(
     "Hello World", "Hello", NULL, false,
     NO_SHORTCUT, 0, NULL, gExtensionID);
AVMenuItemSetComputeEnabledProc(
     myButtonMenuItem,
     pDocExistEnableCallback, NULL);
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVMenuItemSetComputeMarkedProc

```
void AVMenuItemSetComputeMarkedProc (AVMenuItem menuItem,
AVComputeMarkedProc proc, void* data);
```

Description

Sets the user-supplied procedure that determines whether or not the menu item appears with a check mark. Does nothing if **menuItem** is **NULL**. If the menu item has no **AVExecuteProc** (see **AVMenuItemSetExecuteProc**), its **AVComputeMarkedProc** is never called. To avoid this, add an **AVExecuteProc** that does nothing, and if you wish the menu item to gray out, also add an **AVComputeEnabledProc** that always returns **false**.

Parameters

menuItem	The menu item whose **AVComputeMarkedProc** is being set.
proc	User-supplied callback to call whenever the Acrobat viewer needs to know whether or not the **menuItem** should be marked.
data	Pointer to user-supplied data to pass to **proc** each time it is called.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVMenuItemIsMarked
AVMenuItemSetExecuteProc
AVMenuItemSetComputeEnabledProc

Example

```
ASCallback markedProcCallback;
AVMenuItem myButtonMenuItem;

markedProcCallback =
     ASCallbackCreateProto(AVExecuteProc,
           &markedProc);
myButtonMenuItem = AVMenuItemNew(
     "Hello World", "Hello", NULL, false,
     NO_SHORTCUT, 0, NULL, gExtensionID);
AVMenuItemSetComputeMarkedProc(
     myButtonMenuItem, markedProcCallback,
     NULL);
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVMenuItemSetExecuteProc

```
void AVMenuItemSetExecuteProc (AVMenuItem menuItem,
AVExecuteProc proc, void* data);
```

Description

Sets the user-supplied procedure to execute whenever the menu item is chosen. Does nothing if **menuItem** is **NULL**. Plug-ins must not set the execute procedure of the Acrobat viewer's built-in menu items.

Parameters

menuItem	The menu item whose execute procedure is set.
proc	User-supplied callback to call whenever **menuItem** is selected.
data	Pointer to user-supplied data to pass to **proc** each time it is called.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVMenuItemExecute
AVMenuItemSetComputeMarkedProc
AVMenuItemSetComputeEnabledProc

Example

```
ASCallback markedProcCallback;
AVMenuItem myButtonMenuItem;

doHelloAlertCallback =
     ASCallbackCreateProto(AVExecuteProc,
           &doHelloAlert);
myButtonMenuItem = AVMenuItemNew(
     "Hello World", "Hello", NULL, false,
     NO_SHORTCUT, 0, NULL, gExtensionID);
AVMenuItemSetExecuteProc(myButtonMenuItem,
     doHelloAlertCallback, NULL);
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVMenuItemSetTitle

```
void AVMenuItemSetTitle (AVMenuItem menuItem,
const char* title);
```

Description

Sets a menu item's title, which is the string that appears in the user interface. Use this method to manage menu items whose titles change (such as "show/hide fooWindow"), instead of inserting and removing menu items on the fly.

Parameters

menuItem	The menu item whose title is set.
title	The new menu title. It must be a null-terminated string.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVMenuItemGetTitle
AVMenuItemGetName

Example

```
AVMenuItem tempItem;
ASInt32 i;
char buf[20];

for(i=0;i< AVMenuGetNumMenuItems(
     editMenu);i++){
     tempItem =
           AVMenuAcquireMenuItemByIndex(
                 editMenu, i);
     AVMenuItemGetTitle(tempItem, buf,
           sizeof(buf));
     if(!strcmp(buf, "Paste"))
           AVMenuItemSetTitle(tempItem, "Glue");
     AVMenuItemRelease(tempItem);
}
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVPageView

AVPageViewAcquireMachinePort

```
void* AVPageViewAcquireMachinePort (AVPageView pageView);
```

Description

Acquires the platform-specific object needed to draw into the Acrobat viewer's document window using a platform's native graphics calls. When done, release it using **AVPageViewReleaseMachinePort.**

Parameters

pageView	The **AVPageView** whose platform-dependent port is acquired.

Return Value

A platform-dependent value.

- In Mac OS, it is a **GrafPtr**.
- In Windows, it is a **WinPort.**
- In UNIX, it is a **Widget**.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVPageViewReleaseMachinePort

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVPageViewAppearanceGetAVMatrix

```
void AVPageViewAppearanceGetAVMatrix (AVPageView PageView,
ASUns32 flags, CosObj appear, ASFixedRect* ar,
ASFixedMatrix* mr);
```

Description

Calculates a matrix for use with **AVPageViewDrawCosObj** or **AVPageViewDrawCosObjEx** that leaves the appearance unrotated and un-zoomed as specified by **flags**. This is typically used in conjunction with drawing an annotation appearance represented by **appear**.

Parameters

PageView	The page view for which the matrix is calculated.
flags	Annotation flags obtained by **PDAnnotGetFlags**.
appear	Appearance of the object, which is a Form **XObject**.
ar	Bounding rectangle for **appear.**
mr	*(Filled by the method)* The transformation matrix.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVPageViewDrawCosObj
AVPageViewDrawCosObjEx
AVPageViewTransformRectRZ

Example

```
ASFixedMatrix mr;
ASFixedRect ar;
CosObj aprObj;
AVRect avr;
ASUns32 flags = PDAnnotGetFlags(annot);

/* Draw an annotation appearance */
AVPageViewAppearanceGetAVMatrix(pageView, flags, aprObj, &ar, &mr);
AVPageViewDrawCosObjEx(pageView, aprObj, &avr, &mr);
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

AVPageViewBeginOperation

```
void AVPageViewBeginOperation (AVPageView pageView);
```

Description

Increments an internal variable. Neither drawing nor **AVPageViewDidChange** notifications will occur as long as the variable has a value greater than zero. In addition, frames are not pushed onto the view history stack.

Parameters

pageView	The page view whose **SuspendDraw** variable is incremented.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVPageViewEndOperation

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVPageViewClearFocusAnnot

```
ASBool AVPageViewClearFocusAnnot (AVPageView pageView);
```

Description

Removes the focus from the currently selected annotation.

Parameters

pageView	The page view holding the focus.

Return Value

false if there was no focus annotation in effect when the method was called; **true** if there was.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

None

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVPageViewDevicePointToPage

```
void AVPageViewDevicePointToPage (AVPageView pageView,
ASInt16 x, ASInt16 y, ASFixedPoint* p);
```

Description

Transforms a point's coordinates from device space to user space.

Parameters

pageView	Page view for which the point's coordinates are transformed.
x	*x*–coordinate of the point to transform, specified in device space coordinates.
y	*y*–coordinate of the point to transform, specified in device space coordinates.
p	*(Filled by the method)* Pointer to a point whose user space coordinates correspond to **x** and **y**.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVPageViewPointToDevice
AVPageViewRectToDevice
AVPageViewDeviceRectToPage

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVPageViewDeviceRectToPage

```
void AVPageViewDeviceRectToPage (AVPageView pageView,
const AVRect* rect, ASFixedRect* p);
```

Description

Transforms a rectangle from device space to user space coordinates. The resulting **ASFixedRect** is "normal," that is, **left** < **right** and **bottom** < **top**.

Parameters

pageView	Page view for which the rectangle is transformed.
rect	Pointer to a device space rectangle whose coordinates are transformed to user space.
p	*(Filled by the method)* Pointer to a user space rectangle corresponding to **rect**.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVPageViewPointToDevice
AVPageViewDevicePointToPage
AVPageViewDeviceRectToPageRZ
AVPageViewRectToDevice

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVPageViewDeviceRectToPageRZ

```
void AVPageViewDeviceRectToPageRZ (AVPageView pageView,
ASInt32 flags, ASInt16 xHot, ASInt16 yHot, const AVRect* src,
ASFixedRect* dest);
```

Description

Transforms an annotation's rectangle from device space to user space coordinates, allowing for the annotation's attributes of whether it should zoom or rotate when the page is zoomed or rotated. It also specifies a point that can remain in the view.

Parameters

pageView	Page view for which the rectangle is transformed.
flags	Flags to indicate whether the annotation rotates or zooms with the page view. These flags correspond to the annotation's **F** key and can be obtained from **PDAnnotGetFlags**. Must be an OR of the following flags: • **pdAnnotNoZoom**—Annotation does not zoom with the view. • **pdAnnotNoRotate**—Annotation does not rotate with the page.
xHot	x-coordinate of point that should remain in the view.
yHot	y-coordinate of point that should remain in the view.
src	Pointer to a device space annotation rectangle whose coordinates are transformed to user space.
dest	*(Filled by the method)* Pointer to a user space rectangle corresponding to **src**.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVPageViewAppearanceGetAVMatrix

AVPageViewDeviceRectToPage
AVPageViewRectToDevice
AVPageViewTransformRectRZ

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

AVPageViewDeviceToInfo

```
void AVPageViewDeviceToInfo (AVPageView pageView, ASInt32 x,
ASInt32 y, ASFixedPoint* info);
```

Description

Translates the given point from the device space coordinate system to the info space coordinate system.

"Info space" is the coordinate system used by the info palette to provide the user with visual feedback during layout operations. The origin of info space for a given page is the upper left corner of the page. The x-axis is horizontal and increases from left to right. The y-axis is vertical and increases from top to bottom. Units are measured in points. Conceptually, info space is the same as user space, with the y-axis flipped and the origin anchored at the upper left of the page.

Parameters

pageView	The page view holding the focus.
x	The x-coordinate in device space.
y	The y-coordinate in device space.
info	*(Filled by the method)* The translated point.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVPageViewInfoToDevice
AVPageViewInfoToPoint
AVPageViewPointToInfo

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVPageViewDoPopupMenu

```
AVMenuItem AVPageViewDoPopupMenu (AVPageView pageView,
AVMenu menu, ASInt16 xHit, ASInt16 yHit, ASBool rightMouse,
ASInt32 choice);
```

Description

Displays the given **AVMenu** as a popup menu anchored at **xHit** and **yHit**, which are in device coordinates relative to **pageView**.

Parameters

pageView	The page view in which the menu appears.
menu	The displayed menu.
xHit	The x-coordinate of the upper left corner of the menu.
yHit	The y-coordinate of the upper left corner of the menu.
rightMouse	**true** if the right mouse button (where applicable) was used to invoke the popup, **false** otherwise.
choice	The index of the **AVMenuItem** that should appear under the mouse at pop-up time.

Return Value

The menu item selected from **menu.**

Header File

AVCalls.h

Related Methods

AVToolButtonGetMenu
AVToolButtonSetMenu

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

AVPageViewDragOutNewRect

```
void AVPageViewDragOutNewRect (AVPageView pageView,
ASInt16 xStart, ASInt16 yStart, AVRect* resultRect);
```

Description

Allows the user to drag out a new rectangle. Call this method when the user clicks at some point and needs to create a rectangle. The method returns when the user releases the mouse button.

Parameters

pageView	The page view in which the rectangle is created.
xStart	The x–coordinate of the point where the user initially clicked, specified in device space coordinates.
yStart	The y–coordinate of the point where the user initially clicked, specified in device space coordinates.
resultRect	*(Filled by the method)* Pointer to the rectangle that the user dragged out, specified in device space coordinates.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVPageViewDragRect

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVPageViewDragOutNewRectSnapped

```
ASInt32 AVPageViewDragOutNewRectSnapped (AVPageView pageView,
ASInt16 xStart, ASInt16 yStart, AVRect* resultRect,
AVCursor* cursorArray, ASInt16 nCursors);
```

Description

Drags out a rectangle anchored at the given point. The rectangle will be snapped to the layout grid.

Parameters

pageView	The page view in which the rect will be created.
xStart	x-coordinate of the anchor point.
yStart	y-coordinate of the anchor point.
resultRect	*(Filled by the method)* The resulting rectangle generated by the user.
cursorArray	A pointer to an array of **AVCursors**. This value is used in conjunction with **nCursors** and is treated as follows: 1. If **NULL**, the default cursor will be used during the drag. **nCursors** is ignored. 2. If non-**NULL** and **nCursors** is **1**, the supplied cursor will replace the default cursor during the drag. 3. If non-**NULL** and **nCursors** is **2**, the first cursor will replace the default cursor during the drag, and the second cursor will be used if the user presses the control key (Windows) or option key (Mac).
nCursors	Number of cursors supplied in **cursorArray**.

Return Value

A bit-wise OR of the Modifier Keys that were pressed as the rect was dragged out. See **AVSysGetModifiers**.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

None

Availability

Available

if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVPageViewDragRect

```
void AVPageViewDragRect (AVPageView pageView, ASInt16 xStart,
ASInt16 yStart, AVRect* startRect, AVRect* resultRect,
ASInt32 dragType, AVRect* extrema);
```

Description

Allows the user to move or resize a rectangle. Call this method when the user clicks on a rectangle to modify. It returns after the user releases the mouse button.

Parameters

pageView	The page view in which the rectangle is located.
xStart	The x–coordinate of the point where the user initially clicked, specified in device space coordinates.
yStart	The y–coordinate of the point where the user initially clicked, specified in device space coordinates.
startRect	Pointer to the initial rectangle, which is to moved or resized, specified in device space coordinates.
resultRect	*(Filled by the method)* Pointer to the resized or moved rectangle, specified in device space coordinates.
dragType	One of the **AVDragType** constants.
extrema	*(May be **NULL**)* If **NULL**, the rectangle returned by **AVPageViewGetGrayRect** is used instead. Pointer to the rectangle specifying the maximum limits of the user-dragged rectangle. The user cannot grow the rectangle outside **extrema**, specified in device space coordinates. Pass **NULL** if you do not wish to limit the changes the user is making. **extrema** is ignored if **dragType** is **0**.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVPageViewDragOutNewRect

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVPageViewDragRectSnapped

```
ASInt32 AVPageViewDragRectSnapped (AVPageView pageView,
ASInt16 xStart, ASInt16 yStart, AVRect* startRect,
AVRect* resultRect, ASInt32 dragType, AVRect* extrema,
AVCursor* cursorArray, ASInt16 nCursors);
```

Description

Allows the user to move or resize an existing rectangle. If the user has enabled **Snap To Grid** from the main menu, the resulting rectangle will be aligned to the layout grid according to the **dragType** parameter.

Parameters

pageView	The page view in which the rectangle resides.
xStart	The x–coordinate of the point where the user initially clicked, specified in device space coordinates.
yStart	The y–coordinate of the point where the user initially clicked, specified in device space coordinates.
startRect	The initial position of the rectangle.
resultRect	*(Filled by the method)* The position of the rectangle at the end of the operation.
dragType	One of the **AVDragType** constants. These determine whether the drag is a resize or a move operation. To move the rectangle, specify one of the following: **kAVDragRect**—the corner of the rectangle that is closest to (**xStart**,**yStart**) is snapped to the grid, and dragging begins from that point. **kAVDragSnapToXXX** - the corner or edge specified by “XXX” (TopLeft, Top, etc.) is snapped, and dragging begins from that point. To resize the rectangle, specify one of the following: **kAVDragXXX** - the corner or edge specified by "XXX" (TopLeft, Top, etc.) is dragged, and the opposite corner or edge is used as an anchor point.
extrema	*(May be **NULL**)* The rectangle the drag operation is restricted to. If **NULL**, the rectangle returned by **AVPageViewGetGrayRect** is used instead. Use this to restrict the drag operation to a bounding rectangle. May be **NULL**, in which case the bounding rectangle of the page view is used.

cursorArray	A pointer to an array of **AVCursors**. This value is used in conjunction with **nCursors** and is treated as follows: 1. If **NULL**, the default cursor will be used during the drag. **nCursors** is ignored. 2. If non-**NULL** and **nCursors** is **1**, the supplied cursor will replace the default cursor during the drag. 3. If non-**NULL** and **nCursors** is **2**, the first cursor will replace the default cursor during the drag, and the second cursor will be used if the user presses the control key (Windows) or option key (Mac).
nCursors	Number of cursors supplied in **cursorArray**.

Return Value

A bit-wise OR of the Modifier Keys that were pressed as the rect was dragged. See **AVSysGetModifiers**.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

None

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVPageViewDrawAnnotSequence

```
void AVPageViewDrawAnnotSequence (AVPageView pv, PDAnnot an,
AVRect* bbox);
```

Description

Draws the annotation sequence number of an annotation in a rectangle.

Parameters

pv	The page view in which the annotation is drawn.
an	The annotation whose sequence number is drawn.
bbox	Bounding box in which to draw the sequence number of the annotation.

Return Value

None

Header File

AVCalls.h

Related Methods

AVPageViewDrawRect

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

AVPageViewDrawCosObj

```
void AVPageViewDrawCosObj (AVPageView pageView, CosObj cosObj,
AVRect* rect);
```

Description

Draws the **CosObj** (which currently must be a Form object) and scales it to fit **rect**. This method may be used to draw an annotation appearance.

Parameters

pageView	The page view.
cosObj	The **CosObj** to draw.
rect	The rectangle in which to draw.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVPageViewAppearanceGetAVMatrix
AVPageViewDrawCosObjEx

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020002** or higher.

AVPageViewDrawCosObjEx

```
void AVPageViewDrawCosObjEx (AVPageView pageView,
CosObj cosObj, AVRect* rect, ASFixedMatrix* matrix);
```

Description

Draws the **CosObj** (which currently must be a Form object), scales it to fit **rect**, and transforms it according to **matrix**. This method is the same as **AVPageViewDrawCosObj** but applies an **ASFixedMatrix** transformation to the **CosObj** once the **CosObj** has been scaled to the anamorphic dimensions of the **AVRect**. This method may be used to draw an annotation appearance.

Parameters

pageView	The page view.
cosObj	The **CosObj** to draw.
rect	The rectangle in which to draw.
matrix	Pointer to a matrix specifying the matrix to transform the **cosObj** based on **rect**. For example, if the **AVRect** is [10 20 110 220] describing a 100 x 200 area near the top left corner of the page, a **ASFixedMatrix** of [0.5 0 0 0.5 50 100] would scale the **CosObj** to 50% and center it inside the **AVRect**.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVPageViewAppearanceGetAVMatrix
AVPageViewDrawCosObj

Example

```
ASFixedMatrix mr;
ASFixedRect ar;
CosObj aprObj;
AVRect avr;
ASUns32 flags = PDAnnotGetFlags(annot);

/* Draw an annotation appearance */
AVPageViewAppearanceGetAVMatrix(pageView, flags, aprObj, &ar, &mr);
AVPageViewDrawCosObjEx(pageView, aprObj, &avr, &mr);
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020003** or higher.

AVPageViewDrawNow

```
void AVPageViewDrawNow (AVPageView pageView);
```

Description

Forces any pending updates for the specified page view to finish drawing.

Parameters

pageView	The **AVPageView** to redraw.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVPageViewInvalidateRect

Example

```
PDPage page;
AVRect avRect;
ASInt32 annotNum;
PDAnnot anAnnot;

for (annotNum = 0; annotNum <
     PDPageGetNumAnnots(page); annotNum++) {
     anAnnot = PDPageGetAnnot (page,
            annotNum);
     if (PDAnnotGetSubtype(anAnnot) ==
            ASAtomFromString("Text")) {
            AVPageViewGetAnnotRect(pageView,
                  anAnnot, &avRect);
            AVPageViewInvalidateRect(pageView,
                  &avRect);
     }
}
PDPageRelease(page);
AVPageViewDrawNow(pageView);
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVPageViewDrawRect

```
void AVPageViewDrawRect (AVPageView pageView,
const AVRect* rect);
```

Description

Draws a rectangle filled with the color most recently set using **AVPageViewSetColor**.

Parameters

pageView	The page view in which the rectangle is drawn.
rect	Pointer to the rectangle to draw, specified in device space coordinates.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVPageViewDrawRectOutline
AVPageViewDrawAnnotSequence

Example

```
AVRect deviceRect;
AVDoc myAVDoc;
AVPageView currentPageView;

/* Set rectangle's coordinates */
deviceRect.top = 0;
deviceRect.left = 40;
deviceRect.right=80;
deviceRect.bottom=50;
```

```
/* Determine the current page view */
myAVDoc = AVAppGetActiveDoc();
if (myAVDoc != NULL) {
     currentPageView =
           AVDocGetPageView(myAVDoc);

     /* Draw the rectangle */
     AVPageViewDrawRect(currentPageView,
           &deviceRect);
}
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVPageViewDrawRectOutline

```
void AVPageViewDrawRectOutline (AVPageView pageView,
const AVRect* rect, ASInt16 lineWidth, ASFixed* dashArray,
ASInt32 arrayLen);
```

Description

Draws a stroked, but not filled, rectangle using the color most recently set using **AVPageViewSetColor**.

Parameters

pageView	The page view in which the rectangle is drawn.
rect	Pointer to the rectangle to draw, specified in device space coordinates.
lineWidth	Border width in pixels. For **lineWidth** > 1, the border line is entirely *inside* the **rect**, thus shrinking the area inside the outline.
dashArray	Pointer to an array of fixed numbers, whose elements alternately specify the length of dashes and gaps. Pass **NULL** to draw a solid outline.
arrayLen	Number of elements in a **dashArray**. Ignored if **dashArray** is **NULL**. The maximum allowed number of elements is currently 10.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVPageViewDrawRect

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVPageViewDrawRectOutlineWithHandles

```
void AVPageViewDrawRectOutlineWithHandles
(AVPageView pageView, AVRect* rect, ASBool bMidpoints,
ASBool bThin, ASFixed* dashArray, ASInt32 arrayLen);
```

Description

Draws the specified rectangle in the page view with drag handles.

Parameters

pageView	The page view in which the rect is drawn.
rect	The rectangle that is to be drawn.
bMidpoints	If **true**, additional handles are drawn at the midpoint of each side of the rectangle.
bThin	If **true**, the rectangle is drawn using thin lines.
dashArray	Pointer to an array of fixed numbers, whose elements alternately specify the length of dashes and gaps. Pass **NULL**, to use a solid outline.
arrayLen	The number of elements in **dashArray**.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

None

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVPageViewEndOperation

```
void AVPageViewEndOperation (AVPageView pageView);
```

Description

Decrements an internal variable. Neither drawing nor **AVPageViewDidChange** notifications will occur as long as the variable has a value greater than zero. In addition, frames are not pushed onto the view history stack.

Parameters

pageView	The page view whose **SuspendDraw** variable is decremented.

Return Value

None

Exceptions

None

Notifications

AVPageViewDidChange

Header File

AVCalls.h

Related Methods

AVPageViewBeginOperation

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVPageViewFilterKeyDownForFocusAnnot

```
ASBool AVPageViewFilterKeyDownForFocusAnnot
(AVPageView pageView, ASUns16 key, ASInt16 flags,
ASBool* annotWillLoseFocus);
```

Description

Processes a keystroke through the currently focused annotation. The current behavior is defined below:

ASKEY_ESCAPE: The annotation loses focus.

ASKEY_TAB: Focus switches to next annotation in tab order.

ASKEY_ENTER & ASKEY_SPACE: Performs the default action associated with the annotation.

Parameters

pageView	The page view in which the annotation resides.
key	The key code. See ASKey.h for possible values.
flags	A bit-wise OR of the Modifier Flags. See **AVSysGetModifiers**.
annotWillLoseFocus	*(Filled by the method)* If true upon return, the keystroke has caused the annotation to lose focus. May be **NULL** if the caller is not interested in that information.

Return Value

true if the keystroke was processed, **false** otherwise.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

None

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVPageViewFocusAnnotPerformOp

```
ASBool AVPageViewFocusAnnotPerformOp (AVPageView pageView,
AVAnnotOp annotOp);
```

Description

Attempts to have the currently focused annotation perform the given operation. The method will fail if:

- There is no currently selected annotation.
- **annotOp** is other than **kAVAnnotDefaultAction** or **kAVAnnotShowMenu**.
- The annotation handler is not available or does not support the operation.

Parameters

pageView	The page view containing the annotation.
annotOp	The operation to perform.

Return Value

true if the operation was performed successfully, **false** otherwise.

Exceptions

None

Notifications

AVPageViewAnnotDidPerformOp

Header File

AVCalls.h

Related Methods

None

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVPageViewGetActiveBead

```
PDBead AVPageViewGetActiveBead (AVPageView pageView);
```

Description

Gets the currently active article thread bead in the specified page view.

Parameters

pageView	The page view whose currently active bead is obtained.

Return Value

The current bead of the current thread, or a **NULL** Cos object if there is no current thread.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVPageViewGetThreadIndex

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVPageViewGetAnnotRect

```
void AVPageViewGetAnnotRect (AVPageView pageView,
PDAnnot anAnnot, AVRect* rect);
```

Description

Gets an annotation's bounding rectangle. This may be a super-set of the actual bounding box of a particular annotation view.

If the page view has more than one page displayed, as in the continuous modes, you should call **AVPageViewSetPageNum** with the annotation's page number before calling this method.

Parameters

pageView	The page view for which the rectangle is transformed.
anAnnot	The annotation whose bounding rectangle is obtained.
rect	*(Filled by the method)* Pointer to the annotation's bounding rectangle, specified in device space coordinates.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVPageViewSetPageNum
AVPageViewTransformRectRZ
PDPageGetAnnot

Example

```
PDPage page;
AVRect avRect;
ASInt32 annotNum;
PDAnnot anAnnot;

for (annotNum = 0; annotNum <
     PDPageGetNumAnnots(page); annotNum++) {
     anAnnot = PDPageGetAnnot (page,annotNum);
     if (PDAnnotGetSubtype(anAnnot) ==
            ASAtomFromString("Text")) {
            AVPageViewGetAnnotRect(pageView,
                  anAnnot, &avRect);
            AVPageViewInvalidateRect(pageView,
                  &avRect);
     }
}
PDPageRelease(page);
AVPageViewDrawNow(pageView);
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVPageViewGetAperture

```
void AVPageViewGetAperture (AVPageView pageView,
AVRect* rect);
```

Description

Gets the aperture of the specified page view. The aperture is the rectangular region of the window in which the document is drawn, measured in device space units.

Parameters

pageView	The page view whose aperture is obtained.
rect	*(Filled by the method)* Pointer to the aperture rectangle, specified in device space coordinates.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVPageViewGetGrayRect

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVPageViewGetAVDoc

```
AVDoc AVPageViewGetAVDoc (AVPageView pageView);
```

Description

Gets the **AVDoc** for the document currently displayed in **pageView**.

Parameters

pageView	The page view whose **AVDoc** is obtained.

Return Value

The **AVDoc** for **pageView**.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVDocGetPageView
AVPageViewGetPage

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVPageViewGetColor

```
void AVPageViewGetColor (AVPageView pageView,
PDColorValue color);
```

Description

Gets the color that will be used for subsequent drawing by **AVPageViewDrawRect** and **AVPageViewDrawRectOutline**.

Parameters

pageView	The page view whose drawing color is obtained.
color	*(Filled by the method)* The color to get.

Return Value

None

Exceptions

genErrBadParm

Notifications

None

Header File

AVCalls.h

Related Methods

AVPageViewSetColor

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVPageViewGetDevToPageMatrix

```
void AVPageViewGetDevToPageMatrix (AVPageView pageView,
ASFixedMatrix* devToPageMatrix);
```

Description

Gets the matrix that transforms device space coordinates to user space coordinates for the specified page view.

Parameters

pageView	The page view whose matrix is obtained.
devToPageMatrix	*(Filled by the method)* Pointer to the transformation matrix.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVPageViewGetPageToDevMatrix

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVPageViewGetFocusAnnot

```
ASBool AVPageViewGetFocusAnnot (AVPageView pageView,
PDAnnot* annot);
```

Description

Gets the currently focused annotation from the page view.

Parameters

pageView	The page view.
annot	*(Filled by the method)* The currently focused annotation. **NULL** if the method returns **false**.

Return Value

true if the annotation was obtained, **false** otherwise.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

None

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVPageViewGetFirstVisiblePageNum

```
ASInt32 AVPageViewGetFirstVisiblePageNum
(AVPageView pageView);
```

Description

Returns the page number of the first page that is visible on the screen.

Parameters

pageView	The page view.

Return Value

Page number of the first page that is visible on the screen.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVPageViewGetLastVisiblePageNum
AVPageViewPageNumIsVisible
AVPageViewGetPageNum
AVPageViewSetPageNum
AVPageViewGetSelectedAnnotPageNum

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020002** or higher.

AVPageViewGetGrayRect

```
void AVPageViewGetGrayRect (AVPageView pageView,
AVRect* greyRect);
```

Description

Gets the rectangle that bounds a page view. This may include some of the “gray area” outside a page’s crop box.

Parameters

pageView	The page view.
greyRect	*(Filled by the method)* Rectangle bounding the page view, specified in device space coordinates.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVPageViewDrawRect
AVPageViewGetAperture

Example

```
AVRect bounds;

AVPageViewGetGratRect(pageView, &bounds);
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

AVPageViewGetLastVisiblePageNum

```
ASInt32 AVPageViewGetLastVisiblePageNum (AVPageView pageView);
```

Description

Returns the page number of the last page that is visible on the screen.

Parameters

pageView	The page view.

Return Value

Page number of the last page that is visible on the screen.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVPageViewGetFirstVisiblePageNum
AVPageViewPageNumIsVisible
AVPageViewGetPageNum
AVPageViewSetPageNum
AVPageViewGetSelectedAnnotPageNum

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020002** or higher.

AVPageViewGetLayoutMode

```
PDLayoutMode AVPageViewGetLayoutMode (AVPageView pageView);
```

Description

Gets the page layout mode for a page view.

Parameters

pageView	The page view whose layout mode is obtained.

Return Value

pageView's page layout mode, described in **PDLayoutMode**.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVPageViewSetLayoutMode

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020002** or higher.

AVPageViewGetMousePosition

```
void AVPageViewGetMousePosition (AVPageView pageView,
ASInt16* x, ASInt16* y);
```

Description

Gets the mouse position in **pageView.** The mouse position is specified in global coordinates (that is, in Mac OS, it is equivalent to calling the Toolbox **GetMouse** call and adding the window's offset on the screen; in UNIX, it is equivalent to calling **XQueryPointer** and adding the window's offset on the screen).

Parameters

pageView	The page view in which the mouse location is obtained.
x	*(Filled by the method)* The x–coordinate of the mouse location.
y	*(Filled by the method)* The y–coordinate of the mouse location.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVSysMouseIsStillDown

Example

```
AVPageViewGetMousePosition(pageView,
     &xHit, &yHit);
if (AVPageViewIsAnnotAtPoint(pageView,
     xHit, yHit, &anAnnot)){
     /* Pass the click to the annotation,
            causing the annotation's draw method
            to call */
            ...
}
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVPageViewGetMousePositionSnapped

```
void AVPageViewGetMousePositionSnapped (AVPageView pageView,
ASInt16* x, ASInt16* y, AVDragType direction);
```

Description

Gets the current mouse position snapped to the layout grid.

Parameters

pageView	The current page view.
x	*(Filled by the method)* x-coordinate of the mouse position.
y	*(Filled by the method)* y-coordinate of the mouse position.
direction	An **AVDragType** indicating how the point is to be translated. Not all **AVDragType**s are allowed—only those indicating how the point is to be translated. The following **AVDragType**s are used: • **kAVDragRect**—snap to nearest grid intersection • **kAVDragSnapToTopLeft**—snap to nearest grid intersection in top left direction • **kAVDragSnapToTop**—snap to nearest grid line above this point; **x** is unchanged • **kAVDragSnapToTopRight**—snap to nearest grid intersection in top right direction • **kAVDragSnapToRight**—snap to nearest grid line right of this point; **y** is unchanged • **kAVDragSnapToBottomRight**—snap to nearest grid intersection in bottom right direction • **kAVDragSnapToBottom**—snap to nearest grid line below this point; **x** is unchanged • **kAVDragSnapToBottomLeft**—snap to nearest grid intersection in bottom left direction • **kAVDragSnapToLeft**—snap to nearest grid line left of this point; **y** is unchanged

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVPageViewDragOutNewRectSnapped
AVPageViewDragRectSnapped
AVPageViewSnapPoint
AVPageViewSnapRect

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVPageViewGetNextView

```
ASBool AVPageViewGetNextView (AVPageView pageView,
PDDoc* pdDoc, ASInt32* pageNum, ASFixed* scale);
```

Description

Used by page caching code to determine the next page to cache (and at what scale). Allows plug-ins to do their own page caching.

You can replace this method with your own version, using **HFTReplaceEntry**.

Parameters

pageView	The page view.
pdDoc	*(Filled by the method)* The **PDDoc** containing the next page to cache.
pageNum	*(Filled by the method)* The next page to cache.
scale	*(Filled by the method)* The scale of the next page to cache.

Return Value

true if the next page was cached, **false** otherwise.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

None

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020002** or higher.

AVPageViewGetPage

```
PDPage AVPageViewGetPage (AVPageView pageView);
```

Description

Gets a **PDPage** currently displayed in the specified page view**.** This does *not* acquire the page. Do not use this result across methods that might change the current page. To obtain a value that can be used across such calls, use **PDDocAcquirePage** instead.

Parameters

pageView	The page view whose **PDPage** is obtained.

Return Value

PDPage currently displayed in **pageView**, or **NULL** if there is not a valid **PDPage** associated with **pageView**.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

PDDocAcquirePage

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVPageViewGetPageNum

```
ASInt32 AVPageViewGetPageNum (AVPageView pageView);
```

Description

Gets the current page number for **pageView.**

NOTE: If more than one page may be visible, use **AVPageViewGetFirstVisiblePageNum**, **AVPageViewGetLastVisiblePageNum**, or **AVPageViewPageNumIsVisible** instead of this method.

Parameters

pageView	The page view whose current page number is obtained.

Return Value

Current page number, or **-1** if **pageView** is invalid. The first page in a document is page 0.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVPageViewGetFirstVisiblePageNum
AVPageViewGetLastVisiblePageNum
AVPageViewPageNumIsVisible

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVPageViewGetPageToDevMatrix

```
void AVPageViewGetPageToDevMatrix (AVPageView pageView,
ASFixedMatrix* pageToDevMatrix);
```

Description

Gets the matrix that transforms user space coordinates to device space coordinates for the specified page view.

Parameters

pageView	The page view whose transformation matrix is obtained.
pageToDevMatrix	*(Filled by the method)* Pointer to the transformation matrix.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVPageViewGetDevToPageMatrix

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVPageViewGetSelectedAnnotPageNum

```
ASInt32 AVPageViewGetSelectedAnnotPageNum
(AVPageView pageView);
```

Description

Returns the page number of the currently selected annotation or **-1** if no annotation is selected.

Parameters

pageView	The page view.

Return Value

Returns the page number of the currently selected annotation or **-1** if no annotation is selected.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVPageViewGetFirstVisiblePageNum
AVPageViewGetLastVisiblePageNum
AVPageViewPageNumIsVisible

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020002** or higher.

AVPageViewGetThreadIndex

```
ASInt32 AVPageViewGetThreadIndex (AVPageView pageView);
```

Description

Gets the index of the currently active thread in a page view.

Parameters

pageView	The page view whose active thread index is obtained.

Return Value

The thread index of the current thread, or **-1** if there is no current thread.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVPageViewGetActiveBead

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVPageViewGetVisibleAnnotPage

```
ASInt32 AVPageViewGetVisibleAnnotPage (AVPageView pageView,
PDAnnot annot);
```

Description

Gets the number of a page containing an annotation.

Parameters

pageView	The page view with the annotation.
annot	The annotation whose page number is sought.

Return Value

The number of the page containing **annot.**

Header File

AVCalls.h

Related Methods

AVPageViewGetFirstVisiblePageNum
AVPageViewGetLastVisiblePageNum
AVPageViewPageNumIsVisible

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

AVPageViewGetZoom

```
ASFixed AVPageViewGetZoom (AVPageView pageView);
```

Description

Gets the current zoom for **pageView.**

Parameters

pageView	The page view whose zoom is obtained.

Return Value

Current zoom, as a fixed number measured in units in which 1.0 is 100% zoom.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVPageViewGetZoomType
AVPageViewZoomTo

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVPageViewGetZoomType

```
AVZoomType AVPageViewGetZoomType (AVPageView pageView);
```

Description

Gets the current zoom type.

Parameters

pageView	The page view whose zoom type is obtained.

Return Value

The current zoom type.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVPageViewGetZoom

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVPageViewGhostRectOutline

```
void AVPageViewGhostRectOutline (AVPageView pageView,
const AVRect* rect);
```

Description

Draws the specified rectangle in **pageView** using the ghost outline.

Parameters

pageView	The page view into which **rect** is drawn.
rect	The rectangle to draw.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

None

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVPageViewGoBack

```
void AVPageViewGoBack (AVPageView pageView);
```

Description

Goes to the previous view on the view stack, if a previous view exists. This might result in a different document being made active.

Parameters

pageView	The page view to change.

Return Value

None

Exceptions

None

Notifications

AVPageViewDidChange

Header File

AVCalls.h

Related Methods

AVPageViewGoForward

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVPageViewGoForward

```
void AVPageViewGoForward (AVPageView pageView);
```

Description

Goes to the next view on the view stack, if a next view exists. This might result in a different document being made active.

Parameters

pageView	The page view to change.

Return Value

None

Exceptions

None

Notifications

AVPageViewDidChange

Header File

AVCalls.h

Related Methods

AVPageViewGoBack

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVPageViewGoTo

```
void AVPageViewGoTo (AVPageView pageView, ASInt32 pageNum);
```

Description

Goes to specified page, retaining the current location on the page and the current zoom (either explicit or a variable). Invalidates the display, but does not perform an immediate redraw. This allows your plug-in to call **AVPageViewZoomTo**, **AVPageViewScrollTo**, or both and get only a single redraw event. If you decide to do this, you should bracket the calls with **AVPageViewBeginOperation** and **AVPageViewEndOperation**.

Parameters

pageView	The page view in which a different page is displayed.
pageNum	The page number of the destination page. The first page in a document is page 0.

Return Value

None

Exceptions

None

Notifications

AVPageViewDidChange

Header File

AVCalls.h

Related Methods

AVPageViewGetPage
AVPageViewGoBack
AVPageViewGoForward

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVPageViewHighlightText

```
void AVPageViewHighlightText (AVPageView pageView,
PDTextSelect textSelect);
```

Description

Inverts the given text selection on the current page using the current **AVPageView** color.

Parameters

pageView	The page view.
textSelect	The words to highlight.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVPageViewTrackText
AVPageViewInvalidateText
AVPageViewPointInText
PDDocCreateTextSelect

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020002** or higher.

AVPageViewInfoToDevice

```
void AVPageViewInfoToDevice (AVPageView pageView,
const ASFixedPoint* info, ASInt32* x, ASInt32* y);
```

Description

Translates the given point from info space to device space. See **AVPageViewDeviceToInfo** for a definition of info space.

Parameters

pageView	The page view holding the focus.
info	The point in info space.
x	*(Filled by the method)* The x-coordinate of **info** in device space.
y	*(Filled by the method)* The y-coordinate of **info** in device space.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVPageViewDeviceToInfo
AVPageViewInfoToPoint
AVPageViewPointToInfo

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVPageViewInfoToPoint

```
void AVPageViewInfoToPoint (AVPageView pageView,
const ASFixedPoint* info ASFixedPoint* pt);
```

Description

Translates the given point from info space to user space. See **AVPageViewDeviceToInfo** for a definition of info space.

Parameters

pageView	The page view holding the focus.
info	The point in info space.
pt	*(Filled by the method)* The point in user space.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVPageViewDeviceToInfo
AVPageViewInfoToDevice
AVPageViewPointToInfo

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVPageViewInsetRect

```
void AVPageViewInsetRect (AVPageView pageView,
const AVRect* rect, ASBool down);
```

Description

Draws a 3-D looking inset rectangle on the page view. Can be used to implement an "inset" style link where clicking the link causes the page to "push" into the screen.

Parameters

pageView	The page view on which to draw the rectangle.
rect	Rectangle to draw.
down	**true** to draw an inset rectangle, **false** to draw the rectangle in its normal state.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVPageViewDrawRect
AVPageViewDrawRectOutline
AVPageViewInvertRect
AVPageViewInvertRectOutline

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020002** or higher.

AVPageViewInvalidateRect

```
void AVPageViewInvalidateRect (AVPageView pageView,
AVRect* area);
```

Description

Indicates that the specified area of **pageView** is invalid and should be redrawn. This adds the rectangle to the list of regions to redraw, but does not force an immediate redraw. Use **AVPageViewDrawNow** to force an immediate redraw.

Parameters

pageView	The **AVPageView** in which a region is invalidated.
area	Pointer to the rectangle to invalidate, specified in device space coordinates. Use **AVPageViewRectToDevice** to convert a user space rectangle to device space. Pass **NULL** to invalidate the entire currently visible portion of the page.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Example

```
PDPage page;
AVRect avRect;
ASInt32 annotNum;
PDAnnot anAnnot;

for (annotNum = 0; annotNum <
     PDPageGetNumAnnots(page); annotNum++) {
     anAnnot = PDPageGetAnnot (page,
            annotNum);
     if (PDAnnotGetSubtype(anAnnot) ==
            ASAtomFromString("Text")) {
            AVPageViewGetAnnotRect(pageView,
                  anAnnot, &avRect);
            AVPageViewInvalidateRect(pageView,
                  &avRect);
     }
}
PDPageRelease(page);
AVPageViewDrawNow(pageView);
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVPageViewInvalidateText

```
void AVPageViewInvalidateText (AVPageView pageView,
PDTextSelect textSelect);
```

Description

Invalidates the bits that **AVPageViewHighlightText** touches.

Parameters

pageView	The page view.
textSelect	The words to invalidate.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVPageViewHighlightText
AVPageViewPointInText
AVPageViewTrackText

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020002** or higher.

AVPageViewInvertQuad

```
void AVPageViewInvertQuad (AVPageView pageView,
const Quad* quad, ASBool highlight);
```

Description

Inverts the interior of a quad.

Parameters

pageView	The page view in which the inverted quad is drawn.
quad	Pointer to the quad to invert, specified in device space coordinates. Use **AVPageViewPointToDevice** to convert the coordinates of the four corners of the quad that is specified in user space.
highlight	If **true**, uses the highlight mode specified by **avpHighlightMode** in the Acrobat viewer's preferences file (see **AVAppSetPreference**). If **false**, uses a default highlighting mode.

Return Value

None

Header File

AVCalls.h

Related Methods

AVPageViewInvertRect

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

AVPageViewInvertRect

```
void AVPageViewInvertRect (AVPageView pageView,
const AVRect* rect, ASBool highlight);
```

Description

Inverts the interior of a rectangle.

Parameters

pageView	The page view in which the inverted rectangle is drawn.
rect	Pointer to the rectangle to invert, specified in device space coordinates. Use **AVPageViewRectToDevice** to convert the coordinates of a rectangle that is specified in user space.
highlight	If **true**, uses the highlight mode specified by **avpHighlightMode** in the Acrobat viewer's preferences file (see **AVAppSetPreference**). If **false**, uses a default highlighting mode.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVPageViewDrawRect
AVPageViewDrawRectOutline
AVPageViewInsetRect
AVPageViewInvertRectOutline

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVPageViewInvertRectOutline

```
void AVPageViewInvertRectOutline (AVPageView pageView,
const AVRect* rect);
```

Description

Inverts the specified rectangle's outline.

Parameters

pageView	The page view in which the inverted rectangle outline is drawn.
rect	Pointer to the rectangle whose outline is inverted, specified in device space coordinates. Use **AVPageViewRectToDevice** to convert the coordinates of a rectangle that is specified in user space coordinates.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVPageViewDrawRect
AVPageViewDrawRectOutline
AVPageViewInvertRect

Example

```
while (AVSysMouseIsStillDown())
{
     AVPageViewGetMousePosition(pageView,
           &x, &y);
     xDelta = x - xOld;
     yDelta = y - yOld;
     if (xDelta != 0 || yDelta != 0) {
           /* Remove old rectangle. */
           AVPageViewInvertRectOutline(pageView,
                 &rr);
           /* Draw new rectangle reflecting the
                 delta moved by the mouse.*/
           rr.left      += xDelta;
           rr.top       += yDelta;
           rr.right+= xDelta;
           rr.bottom+= yDelta;
           AVPageViewInvertRectOutline(pageView,
                 &rr);

           /* Prepare for next move. */
           xOld = x;
           yOld = y;
     }
}
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVPageViewIsAnnotAtPoint

```
ASBool AVPageViewIsAnnotAtPoint (AVPageView pageView,
ASInt16 xHit, ASInt16 yHit, PDAnnot* hitAnnot);
```

Description

Tests whether or not the specified point is within an annotation. This method is typically used by mouse-handling code, to pass clicks within an annotation to the appropriate annotation handler. For each annotation, this method calls the appropriate annotation handler's **AVAnnotHandlerPtInAnnotViewBBoxProc** to test whether or not the point is within the annotation.

Parameters

pageView	The page view for which the point to test.
xHit	The x–coordinate of the point to test.
yHit	The y–coordinate of the point to test.
hitAnnot	*(Filled by the method)* Pointer to the topmost annotation (if any) that was hit by the mouse click.

Return Value

true if the location specified by **xHit** and **yHit** is within an annotation, **false** otherwise.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVPageViewGetAnnotRect
AVPageViewGetMousePosition
AVPageViewGetSelectedAnnotPageNum
AVPageViewIsAnnotOfTypeAtPoint
AVPageViewGetSelectedAnnotPageNum

Example

```
if (AVPageViewIsAnnotAtPoint(pageView,
     xHit, yHit, &anAnnot)){
     /* Pass click on to the annotation to
            cause the annotation's draw function
            to call */
     ...
}
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVPageViewIsAnnotOfTypeAtPoint

```
ASBool AVPageViewIsAnnotOfTypeAtPoint (AVPageView pageView,
ASInt16 xHit, ASInt16 yHit, ASAtom annotType,
ASBool belowOthers, PDAnnot* annot);
```

Description

Determines if an annotation of the specified type resides under the given point. If so, a handle to the annotation is returned.

NOTE: Most tools which author new annotations should ignore annotations of other types when performing hit tests. Use this routine instead of **AVPageViewIsAnnotAtPoint** to ignore annotations of other types and pass **true** for **belowOthers** so the user can click through annotations of other types.

Parameters

pageView	The page view.
xHit	x-coordinate of the point.
yHit	y-coordinate of the point.
annotType	The annotation type of interest.
belowOthers	If **true**, the search continues below the topmost annotation. Otherwise the search halts after a single annotation is found, irrespective of type.
annot	*(Filled by the method)* The uppermost annotation of the given type.

Return Value

true if an annotation was found, **false** otherwise.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

None

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVPageViewIsBeadAtPoint

```
ASBool AVPageViewIsBeadAtPoint (AVPageView pageView,
ASInt16 xHit, ASInt16 yHit, PDBead* beadP);
```

Description

Tests whether or not the specified point is within a bead. Returns the bead if it is.

Parameters

pageView	The page view in which the point is tested.
xHit	The x–coordinate of the point to test, specified in device space coordinates.
yHit	The y–coordinate of the point to test, specified in device space coordinates.
beadP	*(Filled by the method)* Pointer to the bead in which the point is located. This is only filled if the point is within a bead.

Return Value

true if the point is within a bead, **false** otherwise. If the location is within a bead, the bead is returned in **beadP**.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVPageViewIsFocusAnnot

```
ASBool AVPageViewIsFocusAnnot (AVPageView pageView,
PDAnnot annot);
```

Description

Used to determine if **annot** currently has focus.

Parameters

pageView	The page view in which the annotation resides.
annot	The annotation in question.

Return Value

true if **annot** has the focus, **false** otherwise.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

None

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVPageViewPageNumIsVisible

```
ASBool AVPageViewPageNumIsVisible (AVPageView pageView,
ASInt32 pageNum);
```

Description

Determines if a given page number is visible.

Parameters

pageView	The page view.
pageNum	The page number corresponding to the view of interest.

Return Value

true if **pageNum** is visible, **false** otherwise.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVPageViewGetFirstVisiblePageNum
AVPageViewGetLastVisiblePageNum
AVPageViewGetPageNum
AVPageViewGetSelectedAnnotPageNum
AVPageViewSetPageNum

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020002** or higher.

AVPageViewPointInText

```
ASBool AVPageViewPointInText (AVPageView pageView,
ASInt16 xHit, ASInt16 yHit, PDTextSelect pdText);
```

Description

Tests if the given point is in the **PDTextSelect**.

Parameters

pageView	The page view.
xHit	The x-coordinate to test.
yHit	The y-coordinate to test.
pdText	The text to hit-test upon.

Return Value

true if the point is in the **textSelect**, **false** otherwise.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVPageViewTrackText

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020002** or higher.

AVPageViewPointToDevice

```
void AVPageViewPointToDevice (AVPageView pageView,
const ASFixedPointP p, ASInt16* x, ASInt16* y);
```

Description

Transforms a point's coordinates from user space to device space.

Parameters

pageView	Page view for which the point's coordinates are transformed.
p	Pointer to the **ASFixedPoint** whose coordinates, specified in user space, are transformed.
x	*(Filled by the method)* x–coordinate of the device space point corresponding to **p**.
y	*(Filled by the method)* y–coordinate of the device space point corresponding to **p**.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVPageViewDevicePointToPage
AVPageViewRectToDevice
AVPageViewDeviceRectToPage

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVPageViewPointToInfo

```
void AVPageViewPointToInfo (AVPageView pageView,
const ASFixedPoint* pt, ASFixedPoint* info);
```

Description

Translates the given point from user space to info space. See **AVPageViewDeviceToInfo** for a definition of info space.

Parameters

pageView	The page view holding the focus.
pt	The point in user space.
info	*(Filled by the method)* The point in info space.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVPageViewDeviceToInfo
AVPageViewInfoToDevice
AVPageViewInfoToPoint

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVPageViewReadPageDown

```
void AVPageViewReadPageDown (AVPageView pageView);
```

Description

Scrolls down through a document, as if the user hit the Enter key. The scrolling follows articles if Acrobat is currently in article-reading mode.

Parameters

pageView	The page view to scroll.

Return Value

None

Exceptions

None

Notifications

AVPageViewDidChange

Header File

AVCalls.h

Related Methods

AVPageViewReadPageUp

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVPageViewReadPageUp

```
void AVPageViewReadPageUp (AVPageView pageView);
```

Description

Scrolls up through a document, as if the user hit the Enter key. The scrolling follows articles if Acrobat is currently in article-reading mode.

Parameters

pageView	The page view to scroll.

Return Value

None

Exceptions

None

Notifications

AVPageViewDidChange

Header File

AVCalls.h

Related Methods

AVPageViewReadPageDown

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVPageViewRectToDevice

```
void AVPageViewRectToDevice (AVPageView pageView,
const ASFixedRectP p, AVRect* rect);
```

Description

Transforms a rectangle's coordinates from user space to device space. The resulting **AVRect** will be "normal," that is, **left** < **right** and **top** < **bottom**.

Parameters

pageView	Page view for which the coordinates are transformed.
p	Pointer to the rectangle whose coordinates are transformed, specified in user space coordinates.
rect	*(Filled by the method)* Pointer to a rectangle containing the device space coordinates corresponding to **p**.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVPageViewPointToDevice
AVPageViewDevicePointToPage
AVPageViewDeviceRectToPage

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVPageViewReleaseMachinePort

```
void AVPageViewReleaseMachinePort (AVPageView pageView,
void* port);
```

Description

Releases the platform-specific object needed to draw into Acrobat's document window using a platform's native graphics calls.

Parameters

pageView	The **AVPageView** whose platform-dependent port is released.
port	The platform-specific port to release.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVPageViewAcquireMachinePort

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVPageViewResumeOffscreenDrawing

```
void AVPageViewResumeOffscreenDrawing (AVPageView pageView);
```

Description

Plug-ins that correctly use machine ports should work with the new off-screen drawing behavior introduced in Acrobat 5. For other plug-ins, the **AVPageViewResumeOffscreenDrawing** and **AVPageViewSuspendOffscreenDrawing** are provided for temporarily disabling the off screen drawing behavior so that it acts more like Acrobat 4.0. The one restriction is that you cannot call these routines while the page is being drawn. In other words, do not call these routines from within a drawing callback such as one passed to **AVAppRegisterForPageViewDrawing** or an annotation handler's **DoDraw** or **DoDrawEx** callback.

Parameters

pageView	The **AVPageView** being drawn.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVPageViewSuspendOffscreenDrawing

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVPageViewScrollTo

```
void AVPageViewScrollTo (AVPageView pageView, ASInt16 xOrigin,
ASInt16 yOrigin);
```

Description

Scrolls **pageView** to the location specified by **xOrigin** and **yOrigin**, within the limits imposed by the current zoom mode and the Acrobat viewer.

Parameters

pageView	The page view to scroll.
xOrigin	The x–coordinate to scroll to, specified in device space coordinates.
yOrigin	The y–coordinate to scroll to, specified in device space coordinates.

Return Value

None

Exceptions

None

Notifications

AVPageViewDidChange

Header File

AVCalls.h

Related Methods

AVPageViewScrollToRect
AVPageViewScrollToAnnot

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVPageViewScrollToAnnot

```
void AVPageViewScrollToAnnot (AVPageView pageView,
PDAnnot annot);
```

Description

Scrolls the **pageView** to ensure that the specified **annot** is visible.

Parameters

pageView	The page view to scroll.
annot	The annotation to scroll to.

Return Value

None

Exceptions

None

Notifications

AVPageViewDidChange

Header File

AVCalls.h

Related Methods

AVPageViewScrollToRect
AVPageViewScrollTo

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVPageViewScrollToRect

```
void AVPageViewScrollToRect (AVPageView pageView,
const AVRect* rect, ASBool favorLeft, ASBool favorTop,
ASInt16 margin);
```

Description

Attempts to scroll the page view as little as possible to make the specified rectangle completely visible. This method is handy for auto-scrolling the **AVPageView** in a natural way to bring some page object completely into view. It will not affect the zoom level or **AVZoomType**.

Parameters

pageView	The page view to scroll.
rect	Pointer to the rectangle that is completely visible.
favorLeft	Used when **rect** is wider than the window's aperture. If **favorLeft** is **true**, favors the left side. If **false**, favors the right side. Favoring a side means that the corresponding edge will appear within the aperture, even if the opposite edge will not.
favorTop	Used when **rect** is taller than the window's aperture. If **favorTop** is **true**, favors the top side. If **false**, favors the bottom side. Favoring a side means that the corresponding edge will appear within the aperture, even if the opposite edge will not.
margin	Number of pixels that **rect** should be from the nearest edges if it doesn't cause the rectangle to go from completely visible to partially obscured.

Return Value

None

Exceptions

None

Notifications

AVPageViewDidChange

Header File

AVCalls.h

Related Methods

AVPageViewScrollTo
AVPageViewScrollToAnnot

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVPageViewSetAnnotLocation

```
void AVPageViewSetAnnotLocation (PDAnnot anAnnot,
AVPageView pageView, ASInt16 x, ASInt16 y);
```

Description

Sets an annotation's location, specified in device space coordinates.

Parameters

anAnnot	The annotation whose location is set.
pageView	The page view in which the annotation is displayed.
x	The annotation's new x–coordinate, specified in device space coordinates.
y	The annotation's new y–coordinate, specified in device space coordinates.

Return Value

None

Exceptions

None

Notifications

PDAnnotWillChange
PDAnnotDidChange

Header File

AVCalls.h

Related Methods

AVPageViewGetAnnotRect
PDPageCreateAnnot

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVPageViewSetColor

```
void AVPageViewSetColor (AVPageView pageView,
PDColorValue color);
```

Description

Sets the color that will be used for subsequent drawing by **AVPageViewDrawRect** and **AVPageViewDrawRectOutline**.

Parameters

pageView	The page view whose drawing color is set.
color	The color to set.

Return Value

None

Exceptions

genErrBadParm

Notifications

None

Header File

AVCalls.h

Related Methods

AVPageViewGetColor

Example

```
PDColorValueRec red;
/* Define red */
red.space = PDDeviceRGB;
red.value[0] = Int32ToFixed(1);
red.value[1] = 0;
red.value[2] = 0;

/* set the drawing color */
AVPageViewSetColor(currentPageView, &red);
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVPageViewSetFocusAnnot

```
ASBool AVPageViewSetFocusAnnot (AVPageView pageView,
PDAnnot focusAnnot, AVAnnotOpData opData);
```

Description

Attempts to set an annotation as the active annotation.

Parameters

pageView	The page view in which the annotation resides.
focusAnnot	The annotation in question.
opData	Can be **NULL** and probably should be in most cases. If specified it will be used for the **kAVAnnotAcceptFocus** operation.

Return Value

true if **annot** was given the focus, **false** otherwise.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

None

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVPageViewSetLayoutMode

```
void AVPageViewSetLayoutMode (AVPageView pageView,
PDLayoutMode mode);
```

Description

Sets the layout mode for a page view.

Parameters

pageView	The page view whose layout mode is set.
mode	The new layout mode for the page view.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVPageViewGetLayoutMode

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020002** or higher.

AVPageViewSetPageNum

```
ASInt32 AVPageViewSetPageNum (AVPageView pageView,
ASInt32 pageNum);
```

Description

Sets the current logical page of the page view, which might not be the same as the current number indicated on the screen.

Plug-in writers in general do not need this, but if you wish to perform some operation on a page other than the one returned by **AVPageViewGetPageNum**, you can use this call to temporarily set the page. You must restore the page number when you are done. You should avoid causing any major changes to the page view (such as scrolling) to ensure that you end up restoring the page to the correct value.

Parameters

pageView	The page view.
pageNum	The page number.

Return Value

Previous page number.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVPageViewGetFirstVisiblePageNum
AVPageViewGetLastVisiblePageNum
AVPageViewGetPageNum
AVPageViewGetSelectedAnnotPageNum
AVPageViewPageNumIsVisible

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020002** or higher.

AVPageViewShowControl

```
void AVPageViewShowControl (AVPageView pageView,
AVPageViewControlID controlID, ASBool show);
```

Description

Turns on and off the controls shown in the status area at the bottom of a page view.

Parameters

pageView	The page view whose controls are affected.
controlID	The controls affected.
show	**true** if the controls are displayed, **false** if not shown.

Return Value

None

Header File

AVCalls.h

Related Methods

None

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

AVPageViewSnapPoint

```
void AVPageViewSnapPoint (AVPageView pageView, ASInt16* x,
ASInt16* y, AVDragType direction);
```

Description

Snaps a point to the layout grid if the **avpSnapToGrid** preference is set.

Parameters

pageView	The page view.
x	*(Filled by the method)* The x-coordinate of the point.
y	*(Filled by the method)* The y-coordinate of the point.
direction	An **AVDragType** indicating how the point is to be translated. Not all **AVDragType**s are allowed—only the following **AVDragType**s are used: • **kAVDragRect**—snap to nearest grid intersection • **kAVDragSnapToTopLeft**—snap to nearest grid intersection in top left direction • **kAVDragSnapToTop**—snap to nearest grid line above this point; **x** is unchanged • **kAVDragSnapToTopRight**—snap to nearest grid intersection in top right direction • **kAVDragSnapToRight**—snap to nearest grid line right of this point; **y** is unchanged • **kAVDragSnapToBottomRight**—snap to nearest grid intersection in bottom right direction • **kAVDragSnapToBottom**—snap to nearest grid line below this point; **x** is unchanged • **kAVDragSnapToBottomLeft**—snap to nearest grid intersection in bottom left direction • **kAVDragSnapToLeft**—snap to nearest grid line left of this point; **y** is unchanged

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

None

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVPageViewSnapRect

```
void AVPageViewSnapRect (AVPageView pageView, ASInt16 xStart,
ASInt16 yStart, ASInt16 xNow, ASInt16 yNow, AVRect* startRect,
AVRect* resultRect, ASInt32 handleType, ASUns32 modifiers,
AVRect* extrema);
```

Description

Given a starting point, ending point, and starting rectangle, return a resulting rectangle which is snapped to the grid. The routine is designed for use within a custom mouse-drag loop, when the default drawing behavior provided by **AVPageViewDragRectSnapped** is insufficient.

Parameters

pageView	The page view.
xStart	The x–coordinate of the point where the user initially clicked, specified in device space coordinates.
yStart	The y–coordinate of the point where the user initially clicked, specified in device space coordinates.
xNow	The x–coordinate.
yNow	The y–coordinate.
startRect	The initial position of rectangle.
resultRect	*(Filled by the method)* The position of the rectangle at the end of the operation.
handleType	One of the **AVRectHandleType** enumerated values. This is typically obtained by calling **AVRectHandleHitTest** with the initial rect and starting coordinates.The **handleType** determines which point or edge of the rectangle should be snapped to the grid.

modifiers	Pass **AVSysGetModifiers**. This will pass in one of the **Modifier Keys**. If the key indicates that the Shift key is pressed, one of the following is done: 1. If the **handletype** parameter is a resizing parameter (**kAVRectHandleTopLeft** through **kAVRectHandleLeftMiddle**) then we maintain the aspect ratio of the original rect. 2. If the **handletype** parameter is **kAVRectHandleNone**, this means that the rect is being moved around rather than resized, and we will snap the result rect to the x- or y-axis of the start rect, whichever is closest.
extrema	Use this to restrict the drag operation to a bounding rectangle. May be **NULL**, in which case the bounding rectangle of the page view is used.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

None

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVPageViewStartReadingThread

```
void AVPageViewStartReadingThread (AVPageView pageView,
PDThread thread);
```

Description

Puts the specified page view into “article thread-reading” mode.

Parameters

pageView	The page view to set to article thread-reading mode.
thread	The thread to read.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVPageViewGetActiveBead

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVPageViewSuspendOffscreenDrawing

```
void AVPageViewSuspendOffscreenDrawing (AVPageView pageView);
```

Description

Plug-ins that correctly use machine ports should work with the new off-screen drawing behavior introduced in Acrobat 5.0. For other plug-ins, the **AVPageViewResumeOffscreenDrawing** and **AVpageViewSuspendOffscreenDrawing** are provided for temporarily disabling the off screen drawing behavior so that it acts more like Acrobat 4.0. The one restriction is that you cannot call these routines while the page being is being drawn. In other words, do not call these routines from within a drawing callback such as one passed to **AVAppRegisterForPageViewDrawing** or an annotation handler's **DoDraw** or **DoDrawEx** callback. Off-screen drawing should be suspended as rarely and briefly as possible (e.g., only while a plug-in that does not use machine ports correctly has a selection active).

Parameters

pageView	The **AVPageView** whose drawing is to be suspended.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVPageViewResumeOffscreenDrawing

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVPageViewToDestInfo

```
AVDestInfo AVPageViewToDestInfo (AVPageView pageView,
ASAtom fitType);
```

Description

Creates a destination info object from a given **AVPageView** and **fitType**.

Parameters

pageView	The page view from whose current view the destination info is created.
fitType	The **ASAtom** specifying the fit type that the view destination will have. The string associated with **fitType** must be one of **View Destination Fit Types**.

Return Value

The newly-created destination info.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVDestInfoDestroy
AVPageViewUseDestInfo

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020003** or higher.

AVPageViewToViewDest

```
PDViewDestination AVPageViewToViewDest (AVPageView pageView,
ASAtom fitType, PDDoc srcPDDoc);
```

Description

Builds a **PDViewDestination** from the current zoom and position.

Parameters

pageView	The page view from whose current view the destination is created.
fitType	The **ASAtom** specifying the fit type that the view destination will have. The string associated with **fitType** must be one of **View Destination Fit Types**.
srcPDDoc	Document in which the view destination is used.

Return Value

The newly-created view destination.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

PDViewDestCreate
PDActionGetDest
PDActionNewFromDest

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVPageViewTrackText

```
PDTextSelect AVPageViewTrackText (AVPageView pageView,
ASInt16 xHit, ASInt16 yHit, PDTextSelect current);
```

Description

Called in response to a mouse click to track a text selection on the screen. Uses the **AVPageView** current color, and leaves the screen with any highlights visible. Does not affect the current document selection.

Parameters

pageView	The page view.
xHit	The x-coordinate of the original click.
yHit	The y-coordinate of the original click.
current	Any existing selection that should be built upon.

Return Value

PDTextSelect containing the words selected.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVPageViewHighlightText
AVPageViewInvalidateText
AVPageViewPointInText

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020002** or higher.

AVPageViewTransformRectRZ

```
void AVPageViewTransformRectRZ (AVPageView pv, ASInt32 flags,
ASFixedRect* ar, ASFixedMatrix* mr);
```

Description

Calculates where an annotation is drawn with no zoom or no rotation, as specified by the annotation flags. This method generalizes **AVPageViewGetAnnotRect**.

Parameters

pv	The page view used for the transformation.
flags	Annotation flags obtained by **PDAnnotGetFlags**.
ar	Pointer to the annotation's bounding rectangle, specified in user space coordinates.
mr	*(Filled by the method)* The transformation matrix.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVPageViewAppearanceGetAVMatrix
AVPageViewDeviceRectToPageRZ
AVPageViewGetAnnotRect

Example

```
ASFixedMatrix mr;
ASFixedRect ar, fr;
ASUns32 flags = PDAnnotGetFlags(annot);

PDAnnotGetRect(annot, &ar);
fr = ar;
AVPageViewTransformRectRZ(pageView, flags, &fr, &mr);
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

AVPageViewUpdateInfoPanel

```
void AVPageViewUpdateInfoPanel (AVPageView pageView,
AVInfoPanelUpdateType updateType, void* data);
```

Description

Allow plug-ins to control the Info panel output.

Parameters

pageView	The page view.
updateType	**AVInfoPanelUpdateType** constant. If **kAVInfoPanelLock** or **kAVInfoPanelUnlock**, data should be **NULL** and is ignored. If updateType is **kAVInfoPanelRect**, clients should pass an **AVRect32P** through **data**. It's also useful to note how the rectangle will be interpreted by the info panel. The info panel will display the following data: X: The left of the rectangle. Y: The top of the rectangle. W: The width of the rectangle. H: The height of the rectangle.
data	User-supplied data.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

None

Example

```
AVPageViewUpdateInfoPanel(pageView, kAVInfoPanelLock, NULL);
while (AVSysMouseIsStillDown()) {
     AVRect32 rect;
     ... // Set the rect members to something meaningful, then:
     AVPageViewUpdateInfoPanel(pageView, kAVInfoPanelRect,(void*)&rect);
... // Do other processing
}
AVPageViewUpdateInfoPanel(pageView, kAVInfoPanelUnlock, NULL);
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVPageViewUseDestInfo

```
void AVPageViewUseDestInfo (AVPageView pageView,
AVDestInfo destInfo);
```

Description

Causes the given page view to change to the view given by an **AVDestInfo** object.

Parameters

pageView	The page view to change.
destInfo	The destination to use.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVPageViewToDestInfo
AVPageViewUseThisDestination

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020003** or higher.

AVPageViewUseThisDestination

```
void AVPageViewUseThisDestination (AVPageView pageView,
PDViewDestination viewDest, ASFixed sourceZoom);
```

Description

Causes the given page view to change to the view given by **viewDest** and **sourceZoom**.

Parameters

pageView	The page view to change.
viewDest	The view destination.
sourceZoom	The zoom factor to use, unless **viewDest** specifies inheriting the current zoom, which is the zoom in effect when a link is clicked, for example. **sourceZoom** is used only if a) the view destination is of type XYZ (that is, specifies a point and a zoom) and b) the zoom is zero (meaning “inherit the current zoom”). In this case, **sourceZoom** is used as the zoom to inherit.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

PDViewDestCreate

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020002** or higher.

AVPageViewZoomTo

```
void AVPageViewZoomTo (AVPageView pageView,
AVZoomType zoomType, ASFixed scale);
```

Description

Sets the zoom factor and zoom type for the specified page view.

Parameters

pageView	The page view to zoom.
zoomType	The zoom type to set.
scale	Zoom factor, specified as a magnification factor (for example, 1.0 displays the document at actual size). **scale** is ignored unless **zoomType** is **AVZoomNoVary**. Use zero to inherit the zoom.

Return Value

None

Exceptions

None

Notifications

AVPageViewDidChange

Header File

AVCalls.h

Related Methods

AVPageViewScrollTo
AVPageViewScrollToRect

Example

```
AVPageViewZoomTo (pageView, AVZoomFitPage,
     fixedZero);
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVSweetPea

AVSweetPeaGetBasicSuiteP

```
SPBasicSuite* AVSweetPeaGetBasicSuiteP (void);
```

Description

Used to implement the Adobe Dialog Manager (ADM). Accesses basic suite. For complete details, see *Using ADM In Acrobat*.

Parameters

None

Return Value

Pointer to the structure that contains the “SweetPea” functions.

Exceptions

None

Notifications

None

Header File

AVSPCalls.h

Related Methods

AVSweetPeaGetPluginRef
AVSweetPeaGetResourceAccess
AVSweetPeaIsADMAvailable
AVSweetPeaProcessADMEvent
AVSweetPeaSetResourceAccess

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVSweetPeaGetPluginRef

```
SPPluginRef AVSweetPeaGetPluginRef (void);
```

Description

Used to implement the Adobe Dialog Manager (ADM). This method is used to obtain a reference to the ADM plug-in itself (not the plug-in you are currently developing). For complete details, see *Using ADM In Acrobat*.

Parameters

None

Return Value

A reference to the ADM plug-in itself.

Exceptions

None

Notifications

None

Header File

AVSPCalls.h

Related Methods

AVSweetPeaGetBasicSuiteP
AVSweetPeaGetResourceAccess
AVSweetPeaIsADMAvailable
AVSweetPeaProcessADMEvent
AVSweetPeaSetResourceAccess

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVSweetPeaGetResourceAccess

```
SPErr AVSweetPeaGetResourceAccess (SPPluginRef pluginRef,
SPPlatformAccessRef* resourceAccess);
```

Description

Used to implement the Adobe Dialog Manager (ADM). Call this function to store away the current resource access, which you will restore after your dialog is closed. For complete details, see *Using ADM In Acrobat*.

Parameters

pluginRef	The value returned from the **AVSweetPeaGetPluginRef** method.
resourceAccess	Platform-specific resource information.

Return Value

ADM error codes.

Exceptions

None

Notifications

None

Header File

AVSPCalls.h

Related Methods

AVSweetPeaGetBasicSuiteP
AVSweetPeaGetPluginRef
AVSweetPeaIsADMAvailable
AVSweetPeaProcessADMEvent
AVSweetPeaSetResourceAccess

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVSweetPeaIsADMAvailable

```
ASBool AVSweetPeaIsADMAvailable (void);
```

Description

Used to implement the Adobe Dialog Manager (ADM). This method is used do determine whether ADM is available. For complete details, see *Using ADM In Acrobat*.

Parameters

None

Return Value

`true` if ADM is available. **`false`** if not.

Exceptions

None

Notifications

None

Header File

AVSPCalls.h

Related Methods

AVSweetPeaGetBasicSuiteP
AVSweetPeaGetPluginRef
AVSweetPeaGetResourceAccess
AVSweetPeaProcessADMEvent
AVSweetPeaSetResourceAccess

Availability

Available if **`PI_ACROVIEW_VERSION`** (in PIRequir.h) is set to **`0x00050000`** or higher.

AVSweetPeaProcessADMEvent

```
void AVSweetPeaProcessADMEvent (ASWindowRef window);
```

Description

Used to implement the Adobe Dialog Manager (ADM). Call this function to have a given **ASWindowRef** process events. This is useful for modeless dialogs. For complete details, see *Using ADM In Acrobat*.

Parameters

window	Platform-dependent window handle.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVSPCalls.h

Related Methods

AVSweetPeaGetBasicSuiteP
AVSweetPeaGetPluginRef
AVSweetPeaGetResourceAccess
AVSweetPeaIsADMAvailable
AVSweetPeaSetResourceAccess

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVSweetPeaSetResourceAccess

```
SPErr AVSweetPeaSetResourceAccess (SPPluginRef pluginRef,
SPPlatformAccessRef resourceAccess);
```

Description

Used to implement the Adobe Dialog Manager (ADM). This function tells ADM which resource file contains your dialog resources. For complete details, see *Using ADM In Acrobat*.

Parameters

pluginRef	The value returned from the **AVSweetPeaGetPluginRef** method.
resourceAccess	Platform-specific resource information.

Return Value

Error code.

Exceptions

None

Notifications

None

Header File

AVSPCalls.h

Related Methods

AVSweetPeaGetBasicSuiteP
AVSweetPeaGetPluginRef
AVSweetPeaGetResourceAccess
AVSweetPeaIsADMAvailable
AVSweetPeaProcessADMEvent

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVSys

AVSysAllocTimeStringFromTimeRec

```
char*  AVSysAllocTimeStringFromTimeRec (ASTimeRecP timeRec);
```

Description

Given an **ASTimeRecP**, gets a string representing the date and time. This routine is locale-friendly.

The returned string is allocated using **ASmalloc** and must be freed by the caller with **ASfree**.

Parameters

timeRec	A pointer to an **ASTimeRec** structure.

Return Value

String representing the date and time. Returns **NULL** if conversion fails.

Header File

AVCalls.h

Related Methods

None

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

AVSysBeep

```
void AVSysBeep (ASInt32 duration);
```

Description

Beeps.

Parameters

duration	Always pass **0**.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

None

Example

```
AVSysBeep(0);
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVSysGetCursor

```
AVCursor AVSysGetCursor (void);
```

Description

Gets the current cursor. Use this method when you want to change the cursor temporarily and be able to restore it to its current shape.

Parameters

None

Return Value

The current cursor.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVSysGetStandardCursor
AVSysSetCursor

Example

```
oldCursor = AVSysGetCursor();
AVSysSetCursor(AVSysGetStandardCursor(
     WAIT_CURSOR));
/* do some work */
     ...
/* Return to old cursor */
AVSysSetCursor(oldCursor);
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVSysGetModifiers

```
ASUns32 AVSysGetModifiers (void);
```

Description

Gets a flag indicating which modifier keys are currently being pressed.

Parameters

None

Return Value

An OR of the **Modifier Keys**.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVSysMouseIsStillDown

Example

```
ASBool shiftKeyIsDown =
     ((AVSysGetModifiers() & AV_SHIFT) != 0);
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVSysGetStandardCursor

```
AVCursor AVSysGetStandardCursor (ASInt32 cursorID);
```

Description

Gets the specified cursor. The cursor can subsequently be displayed using **AVSysSetCursor.**

Parameters

cursorID	The cursor to show. Must be one of the **Predefined Cursors**.

Return Value

The specified cursor.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVSysGetCursor
AVSysSetCursor

Example

```
oldCursor = AVSysGetCursor();
AVSysSetCursor(AVSysGetStandardCursor(
     WAIT_CURSOR));
/* Do some work */
     ...
/* Return to old cursor */
AVSysSetCursor(oldCursor);
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVSysMouseIsStillDown

```
ASBool AVSysMouseIsStillDown (void);
```

Description

Tests whether or not the mouse button is still being pressed.

Parameters

None

Return Value

`true` if the user is holding the mouse button down and hasn't released it since the last mouse-down event, **`false`** otherwise.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVSysGetModifiers

Example

```
while (AVSysMouseIsStillDown())
{
     AVPageViewGetMousePosition(pageView,
           &x, &y);
     xDelta = x - xOld;
     yDelta = y - yOld;
     if (xDelta != 0 || yDelta != 0) {
           /* Remove old rectangle. */
           AVPageViewInvertRectOutline(pageView,
                 &rr);
           /* Draw new rectangle reflecting the
                 delta moved by the mouse */
           rr.left      += xDelta;
           rr.top       += yDelta;
           rr.right+= xDelta;
           rr.bottom+= yDelta;
           AVPageViewInvertRectOutline(pageView,
                 &rr);

           /* Prepare for next move. */
           xOld = x;
           yOld = y;
     }
}
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVSysSetCursor

```
void AVSysSetCursor (AVCursor cursor);
```

Description

Sets the cursor to the specified **AVCursor**.

Parameters

cursor	The cursor to display. Predefined platform-independent cursors can be obtained using **AVSysGetStandardCursor.** Plug-ins can use their own custom cursors as follows: Macintosh users: Use the Macintosh Toolbox **GetCursor** call to retrieve your cursor from a resource. Cast the resulting **CursHandle** to an **AVCursor** and pass it to **AVSysSetCursor**. Windows users: Use the Windows API function **LoadCursor** to retrieve your cursor resource. Cast the resulting **HCURSOR** to an **AVCursor** and pass it to **AVSysSetCursor.**

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVSysGetCursor
AVSysGetStandardCursor
AVSysSetWaitCursor

Example

```
oldCursor = AVSysGetCursor();
AVSysSetCursor(AVSysGetStandardCursor(
     WAIT_CURSOR));
/* Do some work */
     ...
/* Return to old cursor */
AVSysSetCursor(oldCursor);
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVSysSetWaitCursor

```
void AVSysSetWaitCursor (ASBool turnOn, ASUns32 timeLimit);
```

Description

Turns the wait cursor on or off. Unlike **AVSysGetCursor**, **AVSysSetWaitCursor** ensures that the wait cursor stays on until another call to **AVSysSetWaitCursor** is made to turn it off, or the time limit is reached. When using this call to turn on the wait cursor, you must ensure that another call will be made to turn it back off.

Parameters

turnOn	**true** sets the wait cursor; **false** resets it.
timeLimit	Time limit in ticks (1/60th of a second). If the time limit is reached, the wait cursor will be turned off as if you called **AVSysSetWaitCursor(false, ...)**. This value is ignored if it is less than or equal to **0** or if the **turnOn** parameter is false. Set this to a reasonable nonzero value to ensure that the user wait cursor will go away.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVSysGetCursor
AVSysGetStandardCursor
AVSysSetCursor

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVTool

AVToolGetType

```
ASAtom AVToolGetType (AVTool tool);
```

Description

Gets the currently active tools's type. See **Toolbar Names** for a list of the built-in tool types.

Parameters

tool	The tool whose type is obtained.

Return Value

The **ASAtom** returned can be converted to a string using **ASAtomGetString**.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVAppEnumTools
AVAppGetActiveTool
AVAppGetDefaultTool
AVAppGetLastActiveTool
AVAppGetToolByName
AVToolIsPersistent

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVToolIsPersistent

```
ASBool AVToolIsPersistent (AVTool tool);
```

Description

Tests whether the specified tool is in a state keeping it active through multiple operations rather than only once, then restoring the previous tool. This method is called by another one-shot tool's **Activate** procedure. Two one-shot tools cannot cycle, because if the previous tool was not persistent, the second non-persistent tool reverts to the default tool.

Parameters

tool	The tool whose persistence flag is tested.

Return Value

true if the tool is persistent, **false** otherwise.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVAppEnumTools
AVAppGetActiveTool
AVAppGetDefaultTool
AVAppGetLastActiveTool
AVAppGetToolByName
AVToolGetType

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVToolBar

AVToolBarAddButton

```
void AVToolBarAddButton (AVToolBar toolBar,
AVToolButton button, ASBool before, AVToolButton otherButton);
```

Description

Inserts a button into a toolbar. Call **AVToolBarUpdateButtonStates** after adding a button to update the toolbar.

In Acrobat 4.0 and later, this adds the button to the vertical toolbar.

Parameters

toolBar	The toolbar into which a button is added.
button	The button to add to the toolbar.
before	If **true**, **button** is added before **otherButton**; if false, it is added after. If **otherButton** is **NULL** and before is **true**, the button is added to the beginning of the toolbar. If **otherButton** is **NULL** and **before** is **false,** the button is added to the end of the toolbar.
otherButton	A button relative to which the new button is added.

Return Value

None

Exceptions

genErrNoMemory

Notifications

None

Header File

AVCalls.h

Related Methods

AVToolButtonRemove

Example

```
AVToolButton myButton;
AVToolbar mybar;

myButton = AVToolButtonNew(
     ASAtomFromString("Hello World"),
     GetResource('SICN', 600), FALSE, FALSE);
mybar = AVAppGetToolBar();
{
     AVToolButton oldButton =
           AVToolBarGetButtonByName(mybar,
           ASAtomFromString("EndDialogGroup"));
     AVToolBarAddButton(mybar, myButton,
           FALSE, oldButton);
}
AVToolBarGetNumButtons:
AVToolbar bar = AVAppGetToolBar();
if(AVToolBarGetNumButtons(bar)){
...
}
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVToolBarEnumButtons

```
void AVToolBarEnumButtons (AVToolBar toolBar,
AVToolButtonEnumProc enumProc, void* clientData);
```

Description

Calls **enumProc** once for each toolbar button in the specified toolbar.

If a tool button has a flyout, this is a *separate* toolbar from the toolbar returned by **AVAppGetToolBar**; enumerating the toolbar buttons on this main toolbar does *not* enumerate the toolbar buttons on any flyout. To enumerate the toolbar buttons on a button's flyout, call **AVToolButtonGetFlyout** to get its associated toolbar, then call **AVToolBarEnumButtons** with this toolbar.

NOTE: **AVToolBarEnumButtons** does not enumerate toolbar buttons that are marked as external by **AVToolButtonSetExternal**.

Parameters

toolBar	The toolbar whose buttons are enumerated.
enumProc	User-supplied procedure to call once for each button. Enumeration ends if **enumProc** returns **false**.
clientData	Pointer to user-supplied data to pass to **enumProc** each time it is called.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVAppGetToolBar
AVToolBarGetButtonByName
AVToolButtonGetFlyout
AVToolButtonSetExternal

Example

```
/* Find the "Hand" toolbar button */
ACCB1 ASBool ACCB2 myButtonEnum
     (AVToolButton button, void* clientData){
     if(AVToolButtonGetName(button) ==
            ASAtomFromString("Hand"))
            return false;
     return true;
}
AVToolBarEnumButtons(bar,
     ASCallbackCreateProto(
     AVToolButtonEnumProc, &myButtonEnum),
     NULL);
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to 0x00020000 or higher.

AVToolBarGetButtonByName

```
AVToolButton AVToolBarGetButtonByName (AVToolBar toolBar,
ASAtom buttonName);
```

Description

Gets the toolbar button that has the specified name.

Parameters

toolBar	The toolbar in which the button is located.
buttonName	The **ASAtom** for the button to get. The character string representing **buttonName** can be converted to an **ASAtom** using **ASAtomFromString**. See **Toolbar Button Names** for a list of the names of the built-in buttons.

Return Value

The button with the specified name; if the name is not found, the return value is **NULL**.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVToolBarEnumButtons

Example

```
/* Add a button just before the
     endToolsGroup separator */
AVToolBarAddButton(AVAppGetToolBar(),
     myToolButton, true,
     AVToolBarGetButtonByName(ToolBar,
           ASAtomFromString("endToolsGroup")));
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVToolBarGetFrame

```
void AVToolBarGetFrame (AVToolBar toolBar, AVRect* frame);
```

Description

Gets the coordinates of **toolBar**'s frame.

UNIX users: The toolbar frame is not needed or used, and this method returns a meaningless frame.

Parameters

toolBar	The toolbar whose frame is obtained.
frame	*(Filled by the method)* Pointer to a rectangle specifying the toolbar's frame, specified in device space coordinates.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVAppGetToolBar
AVToolButtonGetFlyout

Example

```
AVRect frame;

AVToolBarGetFrame(AVAppGetToolBar(),
     frame);
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVToolBarGetNumButtons

```
ASInt32 AVToolBarGetNumButtons (AVToolBar toolBar);
```

Description

Gets the number of buttons in **toolbar.**

Parameters

toolBar	The toolbar whose button count is obtained.

Return Value

The number of buttons in **toolBar.**

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVAppGetToolBar
AVToolButtonGetFlyout

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVToolBarIsRoomFor

```
ASBool AVToolBarIsRoomFor (AVToolBar toolBar,
ASInt16 nButtons, ASInt16 nSeparators);
```

Description

Tests whether or not there is room in a toolbar for an additional specified number of buttons and separators.

In Windows, this method assumes the application window has been maximized.

Parameters

toolBar	The toolbar to check.
nButtons	The number of buttons.
nSeparators	The number of separators.

Return Value

true if there is room in **toolBar** to add **nButtons** and **nSeparators**, **false** otherwise.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVAppGetToolBar
AVToolBarGetFrame
AVToolBarGetNumButtons
AVToolButtonGetFlyout
AVToolButtonNew

Example

```
AVToolbar mybar = AVAppGetToolBar();
freeSlot = AVToolBarIsRoomFor(mybar, 1, 0);
if (freeSlot){
     /* add new button */
     ...
}
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVToolBarNew

```
AVToolBar AVToolBarNew (const char* name, const char* title);
```

Description

Creates a new named toolbar. **AVAppRegisterToolBarPosition** must be called after creating the new toolbar to position it relative to other toolbars.

Parameters

name	The internal, language-independent name of the toolbar. May not be **NULL**.
title	The localized, user-friendly name of the toolbar. May not be **NULL**.

Return Value

The new **AVToolBar**.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVToolBarGetFrame
AVToolBarGetNumButtons
AVToolButtonGetFlyout
AVToolButtonNew

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVToolBarNewFlyout

```
AVToolBar AVToolBarNewFlyout (void);
```

Description

Creates a new sub-toolbar for use as a toolbar button *flyout*.

Flyouts are established by creating a new toolbar with **AVToolBarNewFlyout**, appending toolbar buttons to the new toolbar using **AVToolBar** calls, and attaching that toolbar to a tool button, known as the *anchor button*, with **AVToolButtonSetFlyout**.

This method creates a distinct toolbar from the toolbar returned by **AVAppGetToolBar**.

NOTE: The viewer makes a copy of the anchor button and attaches it to the front of the flyout to achieve the correct visual effect; the client doesn't need to do this.

Parameters

None

Return Value

The newly-created toolbar to use for a flyout.

Header File

AVCalls.h

Related Methods

AVToolButtonGetFlyout
AVToolButtonSetFlyout

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

AVToolBarUpdateButtonStates

```
void AVToolBarUpdateButtonStates (AVToolBar toolbar);
```

Description

Forces a redraw of **toolbar.** Call this method when a toolbar button is added or removed or one of the buttons changes state.

Parameters

toolbar	The toolbar to redraw.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVAppGetToolBar
AVToolBarGetFrame
AVToolBarIsRoomFor
AVToolButtonGetFlyout

Example

```
AVToolBarUpdateButtonStates(
     AVAppGetToolBar());
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVToolButton

AVToolButtonDestroy

```
void AVToolButtonDestroy (AVToolButton toolButton);
```

Description

Removes the specified button from the toolbar and destroys the button. Call **AVToolBarUpdateButtonStates** after removing a button to update the toolbar.

Parameters

toolButton	The button to destroy.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVToolButtonNew

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVToolButtonExecute

```
void AVToolButtonExecute (AVToolButton button);
```

Description

Executes the **AVExecuteProc** associated with **button,** if it exists. This **AVExecuteProc** is set by **AVToolButtonSetExecuteProc**. Does nothing if **AVToolButtonIsEnabled** for the button returns **false.**

Parameters

button	The button whose execute proc is executed.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVToolButtonIsEnabled
AVToolButtonNew
AVToolButtonSetExecuteProc

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVToolButtonGetFlyout

```
AVToolBar AVToolButtonGetFlyout (AVToolButton button);
```

Description

Gets the *flyout* attached to a toolbar button. A flyout is a sub-toolbar attached to a toolbar button.

This method gets a *different* toolbar from the toolbar returned by **AVAppGetToolBar**.

Parameters

button	The toolbar button for which the flyout is obtained.

Return Value

The flyout associated with **button**. Returns **NULL** if there is no flyout associated with **button**.

Header File

AVCalls.h

Related Methods

AVToolBarNewFlyout
AVToolButtonSetFlyout

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

AVToolButtonGetIcon

```
AVIcon AVToolButtonGetIcon (AVToolButton button);
```

Description

Gets the icon associated with the specified **AVToolButton**.

Parameters

button	The button whose icon is returned.

Return Value

The icon associated with **button.**

Header File

AVCalls.h

Related Methods

AVToolButtonSetIcon

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

AVToolButtonGetMenu

```
AVMenu AVToolButtonGetMenu (AVToolButton button);
```

Description

Gets the menu attached to a toolbar button.

Parameters

button	The toolbar button to which a menu is attached.

Return Value

The menu attached to **button.**

Header File

AVCalls.h

Related Methods

AVPageViewDoPopupMenu
AVToolButtonSetMenu

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

AVToolButtonGetName

```
ASAtom AVToolButtonGetName (AVToolButton button);
```

Description

Gets the **ASAtom** corresponding to the name of the specified toolbar button.

Parameters

button	The toolbar button whose name is obtained.

Return Value

The **ASAtom** corresponding to the toolbar button's name. **ASAtom** can be converted to a character string using **ASAtomGetString**. See **Toolbar Button Names** for a list of the built-in button names.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVToolBarGetButtonByName

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVToolButtonIsEnabled

```
ASBool AVToolButtonIsEnabled (AVToolButton button);
```

Description

Tests whether or not a toolbar button is enabled.

Parameters

button	The button to test.

Return Value

true if **button**'s **AVComputeEnabledProc** returns **true**, **false** otherwise.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVToolButtonSetComputeEnabledProc

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVToolButtonIsMarked

```
ASBool AVToolButtonIsMarked (AVToolButton button);
```

Description

Tests whether or not the specified button is marked.

Parameters

button	The button to test.

Return Value

true if **button**'s **AVComputeMarkedProc** returns **true**, **false** if **button** is not marked or doesn't have an **AVComputeMarkedProc.**

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVToolButtonSetComputeMarkedProc

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVToolButtonIsSeparator

```
ASBool AVToolButtonIsSeparator (AVToolButton toolButton);
```

Description

Tests whether a toolbar button is a separator or a normal button.

Parameters

button	The button to test.

Return Value

true if the button is a separator, **false** otherwise.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVToolButtonNew

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVToolButtonNew

```
AVToolButton AVToolButtonNew (ASAtom name, AVIcon icon,
ASBool longOnly, ASBool isSeparator);
```

Description

Creates a toolbar button with the specified name, icon and long-menus state. Can also be used to create a separator with the specified name.

Parameters

name	The **ASAtom** corresponding to the button's name. The character string for **name** can be converted to an **ASAtom** using **ASAtomFromString.**
icon	The icon to use for this button. In Mac OS, **icon** must be a handle to a standard **SICN** resource. In Windows, **icon** is an 18×18 icon with a light gray background (that is, RGB values of 192,192,192).
longOnly	*(Ignored in Acrobat 3.0 or later)* If **true**, the button is shown only when the user selects "Full menus" in the Acrobat viewer. If **false**, shows in both "Full menu" and "Short menu" modes.
isSeparator	If **true**, the new button is a separator used to leave space between groups of related buttons. For separators, **icon**, the button's **AVExecuteProc**, **AVComputeEnabledProc**, and **AVComputeMarkedProc** are ignored. In addition, separators are not click-able. If **false,** the button is a normal toolbar button.

Return Value

The newly-created button.

Exceptions

genErrNoMemory

Notifications

None

Header File

AVCalls.h

Related Methods

AVToolButtonDestroy

AVToolButtonSetExecuteProc
AVToolButtonSetComputeEnabledProc
AVToolButtonSetComputeMarkedProc

Example

```
AVToolButton myButton;
AVToolbar mybar;

myButton = AVToolButtonNew(
     ASAtomFromString("Hello World"),
     GetResource('SICN', 600), FALSE, FALSE);
mybar = AVAppGetToolBar();
freeslots = AVToolBarIsRoomFor(mybar, 1,
     0);

if (freeslots){
     /* add new button after all others */
     AVToolButton oldButton =
            AVToolBarGetButtonByName(mybar,
            ASAtomFromString("EndDialogGroup"));
     AVToolBarAddButton(mybar, myButton,
            FALSE, oldButton);
     AVToolButtonSetExecuteProc(myButton,
            doHelloAlertCallback, NULL);
     AVToolButtonSetComputeEnabledProc(
            myButton, DocExistEnableCallback,
            NULL);
     AVToolButtonSetComputeMarkedProc(
            myButton, markedProcCallback, NULL);
}
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVToolButtonRemove

```
void AVToolButtonRemove (AVToolButton toolButton);
```

Description

Removes the specified button from the toolbar, but does not destroy the button. Call **AVToolBarUpdateButtonStates** after removing a button to update the toolbar.

Parameters

toolButton	The button to remove.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVToolBarAddButton

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVToolButtonSetComputeEnabledProc

```
void AVToolButtonSetComputeEnabledProc (AVToolButton button,
AVComputeEnabledProc proc, void* clientData);
```

Description

Sets the **AVComputeEnabledProc** associated with a toolbar button. This routine determines whether the button can be selected.

Parameters

button	The button whose **AVComputeEnabledProc** is set.
proc	User-supplied procedure to call whenever the Acrobat viewer needs to know whether or not **button** should be enabled.
clientData	Pointer to user-supplied data to pass to **proc** each time it is called.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVToolButtonIsEnabled

Example

```
AVToolButton oldButton =
     AVToolBarGetButtonByName(mybar,
           ASAtomFromString("EndDialogGroup"));
AVToolBarAddButton(mybar, myButton, FALSE,
     oldButton);
AVToolButtonSetExecuteProc(myButton,
     doHelloAlertCallback, NULL);
AVToolButtonSetComputeEnabledProc(myButton,
     DocExistEnableCallback, NULL);
AVToolButtonSetComputeMarkedProc(myButton,
     markedProcCallback, NULL);
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVToolButtonSetComputeMarkedProc

```
void AVToolButtonSetComputeMarkedProc (AVToolButton button,
AVComputeMarkedProc proc, void* clientData);
```

Description

Sets the **AVComputeMarkedProc** associated with a toolbar button. A marked button appears pressed on the screen.

Parameters

button	The button whose **AVComputeMarkedProc** is set.
proc	User-supplied callback to call whenever the Acrobat viewer needs to know whether or not the specified toolbar button should be marked.
clientData	Pointer to user-supplied data to pass to **proc** each time it is called.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVToolButtonIsMarked
AVToolButtonNew
AVToolButtonSetComputeEnabledProc
AVToolButtonSetExecuteProc

Example

```
AVToolButton oldButton =
     AVToolBarGetButtonByName(mybar,
           ASAtomFromString("EndDialogGroup"));
AVToolBarAddButton(mybar, myButton, FALSE,
     oldButton);
AVToolButtonSetExecuteProc(myButton,
     doHelloAlertCallback, NULL);
AVToolButtonSetComputeEnabledProc(myButton,
     DocExistEnableCallback, NULL);
AVToolButtonSetComputeMarkedProc(myButton,
     markedProcCallback, NULL);
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVToolButtonSetExecuteProc

```
void AVToolButtonSetExecuteProc (AVToolButton button,
AVExecuteProc proc, void* clientData);
```

Description

Sets the user-supplied procedure to call to actually “do” whatever the button does.

Parameters

button	The button whose **AVExecuteProc** is set.
proc	User-supplied procedure to call when **button** is executed.
clientData	Pointer to user-supplied data to pass to **proc** each time it is called.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVToolButtonNew
AVToolButtonSetComputeEnabledProc
AVToolButtonSetComputeMarkedProc

Example

```
AVToolButton oldButton =
     AVToolBarGetButtonByName(mybar,
           ASAtomFromString("EndDialogGroup"));
AVToolBarAddButton(mybar, myButton, FALSE,
     oldButton);
AVToolButtonSetExecuteProc(myButton,
     doHelloAlertCallback, NULL);
AVToolButtonSetComputeEnabledProc(myButton,
     DocExistEnableCallback, NULL);
AVToolButtonSetComputeMarkedProc(myButton,
     markedProcCallback, NULL);
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVToolButtonSetExternal

```
void AVToolButtonSetExternal (AVToolButton button,
ASUns16 external);
```

Description

Indicates that the specified toolbar button should be displayed in toolbars contained in external windows, such as in a Web browser.

NOTE: Call **AVToolButtonSetExternal** before adding the toolbutton with **AVToolBarAddButton**. If you want to change the toolbutton's location after it has been added, call **AVToolButtonSetExternal** and re-add the button with **AVToolBarAddButton**.

Parameters

button	The button.
external	Indicates whether or not to show the button in external windows. Must be one of **Tool Button Flags**. NOTE: To enable a toolbar button in an external window, first remove the button from the toolbar, then turn on the **TOOLBUTTON_EXTERNAL** flag and add the button back on to the toolbar.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVToolButtonNew

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020002** or higher.

AVToolButtonSetFlyout

```
void AVToolButtonSetFlyout (AVToolButton button, AVToolBar bar);
```

Description

Attaches a sub-toolbar or *flyout* to a toolbar button. A copy of the button is attached to the front of the toolbar. Click-hold pops up the *flyout* and allow the user to select a different button.

Flyouts are established by creating a new toolbar with **AVToolBarNewFlyout**, appending toolbar buttons to the new toolbar using **AVToolBar** calls, and attaching that toolbar to a tool button, known as the *anchor button*, with **AVToolButtonSetFlyout**.

Parameters

button	The toolbar button to attach to the flyout.
bar	The flyout to which **button** is attached.

Return Value

None

Header File

AVCalls.h

Related Methods

AVToolBarNewFlyout
AVToolButtonGetFlyout

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

AVToolButtonSetHelpText

```
void AVToolButtonSetHelpText (AVToolButton button,
const char* text);
```

Description

Sets the text to show in “tooltips.” This text is shown when the cursor is held over a toolbar button for period of time.

In Acrobat 4.0 and later, toolbar buttons can also have single key shortcuts assigned to them. (Conceptually, tools have shortcuts but we attach the shortcuts to the buttons.) This is done by appending a vertical bar character “|” followed by the shortcut to the button’s tooltip text. For example, here’s the tooltip text for the Hand tool:

“Hand Tool (H)|h”

The trailing “|h” portion indicates that the Hand tool uses the ’H’ key as the shortcut. This portion is stripped off before the tooltip is displayed.

This behavior only applies to tooltips where the “|” is the second-to-last character.

Appending the shortcut to the tooltip text allows it to localize at the same time as the tooltip text.

Parameters

button	The toolbar button to which a tooltip is added.
text	The text to show.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVToolButtonNew

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020002** or higher.

AVToolButtonSetIcon

```
void AVToolButtonSetIcon (AVToolButton button, AVIcon icon);
```

Description

Sets a new icon for a toolbar button.

A tool button's icon can change dynamically. This allows multi-state buttons, such as the one that opens and closes the splitter bar, to change appearance appropriately. This should allow multiple buttons to collapse into one.

Most other aspects of a tool button, such as execute proc and tooltip text, can be changed on the fly using other **AVToolButton** methods.

Parameters

button	The toolbar button whose icon is set.
icon	The icon to place on **button**.

Return Value

None

Header File

AVCalls.h

Related Methods

AVToolButtonGetIcon

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

AVToolButtonSetMenu

```
void AVToolButtonSetMenu (AVToolButton button, AVMenu menu);
```

Description

Attaches a menu to a toolbar button.

If a tool button has no execute proc, the menu pops up when the tool button is clicked. If the tool button does have an execute proc, the user must click and hold on the button for some time to display the menu. Simply clicking on the button invokes the button's execute proc as usual.

Parameters

button	The toolbar button to which a menu is attached.
menu	The menu to attach to **button.**

Return Value

None

Header File

AVCalls.h

Related Methods

AVPageViewDoPopupMenu
AVToolButtonGetMenu

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

AVWindow

AVWindowBecomeKey

```
void AVWindowBecomeKey (AVWindow win);
```

Description

Makes **win** the key window (regardless of the setting of its **WantsKey** flag) if the window is visible.

UNIX users: This method is a no-op.

Parameters

win	The window that is to become the key window.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVWindowSetWantsKey
AVWindowIsVisible
AVWindowResignKey

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVWindowBringToFront

```
void AVWindowBringToFront (AVWindow win);
```

Description

Brings the specified window to the front.

Parameters

win	The window to bring to the front.

Return Value

None

Exceptions

None

Notifications

AVAppFrontDocDidChange

Header File

AVCalls.h

Related Methods

AVWindowBecomeKey
AVWindowIsKey
AVWindowSetWantsKey

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVWindowCenter

```
void AVWindowCenter (AVWindow win);
```

Description

Centers the window within its parent window or the desktop if it has no parent.

Parameters

win	The window to center.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

None

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVWindowDestroy

```
void AVWindowDestroy (AVWindow win);
```

Description

Destroys the specified window and all associated memory. Closes the window without calling the window handler's **AVWindowWillCloseProc** (that is, this operation cannot be rejected).

Parameters

win	The window to destroy.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVWindowNew
AVWindowNewFromPlatformThing

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVWindowDrawNow

```
void AVWindowDrawNow (AVWindow win);
```

Description

Redraws the invalid regions of the specified window.

Parameters

win	The window to draw.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVWindowInvalidateRect

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVWindowEnsureInBounds

```
void AVWindowEnsureInBounds (AVWindow win);
```

Description

If the **win** is completely outside the desktop region (i.e., off-screen), it is moved so that it will be within the desktop region (i.e., on-screen). No action is taken if a draggable edge of the window is within the desktop region. The “desktop region” doesn’t include the task bar (Windows) or menubar (Macintosh).

Parameters

win	The window to ensure is on-screen.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

None

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVWindowGetFrame

```
void AVWindowGetFrame (AVWindow win, AVRect* rect);
```

Description

Gets the window's frame, which specifies its size and location on the screen.

NOTE: In Mac OS, this method may change the current port, thus altering the Macintosh graphics state. It sets the port to that specified by win, but fails to restore the previous port before exiting.

Parameters

win	The window whose frame is obtained.
rect	*(Filled by the method)* Pointer to a rectangle specifying the window's frame rectangle, specified in global screen coordinates. In Mac OS, the frame includes only the window's content region. In Windows, it includes the entire window (content region, title bar, and so forth).

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVWindowSetFrame
AVWindowGetInterior

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVWindowGetInterior

```
void AVWindowGetInterior (AVWindow win, AVRect* rect);
```

Description

Gets the interior rectangle of the window.

Parameters

win	The window whose interior is obtained.
rect	*(Filled by the method)* Pointer to a rectangle specifying the window's interior, specified as local window coordinates.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVWindowGetFrame
AVWindowSetFrame

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVWindowGetMinMaxSize

```
void AVWindowGetMinMaxSize (AVWindow win, AVRect* rect);
```

Description

Gets the minimum and maximum size of the window.

Top and **left** in **rect** are for minimum size; **bottom** and **right** are for maximum size.

Parameters

win	The window whose size is obtained.
rect	*(Filled by the method)* Pointer to a rectangle specifying the window's size, specified in device space coordinates. If this method is not supported on a particular platform, the minimum size returned is **0**, **0** and the maximum size is **ASMAXInt16**, **ASMAXInt16**.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVWindowSetMinMaxSize

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00040005** or higher.

AVWindowGetOwnerData

```
void*  AVWindowGetOwnerData (AVWindow win);
```

Description

Gets a window's owner data. The owner data is private data for the use of the window's creator. For example, if a plug-in uses its own class library, it might use the owner data field to store a pointer to the object owning the **AVWindow**.

Parameters

win	The window whose owner data is obtained.

Return Value

Pointer to owner data for **win**.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVWindowSetOwnerData

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVWindowGetPlatformThing

```
void* AVWindowGetPlatformThing (AVWindow win);
```

Description

Returns a pointer to the platform-specific thing associated with the window. Do not confuse this with the owner data (see also **AVWindowGetOwnerData**).

Parameters

win	Platform-dependent window thing: a **WindowPtr** in Mac OS, an **HWND** in Windows, and a **Widget** in UNIX.

Return Value

The platform-dependent thing for the window. **NULL** if the window is associated with an **AVDoc** that has been set dead by **AVDocSetDead**.

Exceptions

AVDocWantsToDie is broadcast after **AVDocSetDead** has been called, which would warn that the **AVWindow** associated with that window is **NULL**.

Notifications

None

Header File

AVCalls.h

Related Methods

AVDocGetAVWindow
AVWindowNewFromPlatformThing
AVWindowNew

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVWindowGetTitle

```
ASInt32 AVWindowGetTitle (AVWindow win, char* buffer,
ASInt32 bufferLen);
```

Description

Gets the title to display in the specified window's title bar.

Parameters

win	The window whose title is obtained.
buffer	*(Filled by the method)* The buffer into which the window's title is read.
bufferLen	Length of **buffer**, in bytes.

Return Value

The number of characters copied into **buffer**. If **buffer** is **NULL**, but **win** is not, the number of characters in the window title. If **win** is **NULL**, returns **0**.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVWindowSetTitle

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVWindowHandlePlatformEvent

```
ASBool AVWindowHandlePlatformEvent (AVWindow win,
void* platformEvent);
```

Description

Handles a platform-specific event. Use this method to dispatch a platform-specific event structure to an **AVWindow**.

Parameters

win	The window with the event to handle.
platformEvent	A pointer to a platform-specific event structure.

Return Value

true if the event was handled, **false** otherwise.

Exceptions

May raise exceptions, depending on the event.

Notifications

None

Header File

AVCalls.h

Related Methods

AVAppHandleAppleEvent
AVAppHandlePlatformEvent

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

AVWindowHide

```
void AVWindowHide (AVWindow win);
```

Description

Hides the specified window. Hiding a window makes it invisible, it does not minimize or icon-ize it.

In Windows, a document window can be minimized using code based on the following:

```
theAVWindow = AVDocGetAVWindow(theAVDoc);
theThing = (HWND)AVWindowGetPlatformThing(
           theAVWindow);
wasVisible = ShowWindow(theThing,
     SW_MINIMIZED);
```

Parameters

win	The window to hide.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVWindowShow

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVWindowInvalidateRect

```
void AVWindowInvalidateRect (AVWindow win,
const AVRect* rect);
```

Description

Invalidates the specified rectangular region, for eventual redraw. This is the preferred method for refreshing a portion of an **AVWindow**. Use **AVWindowDrawNow** to force a window to redraw its invalid regions.

Parameters

win	The window in which to invalidate **rect.**
rect	Pointer to a rectangle specifying the region to invalidate.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVWindowDrawNow
AVWindowGetInterior

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVWindowIsKey

```
ASBool AVWindowIsKey (AVWindow win);
```

Description

Tests whether or not the specified window is the key window. The key window is the window that receives mouse clicks.

UNIX users: This method is a no-op.

Parameters

win	The window to test.

Return Value

true if **win** is the key window, **false** otherwise.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVWindowBecomeKey
AVWindowBringToFront
AVWindowSetWantsKey

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVWindowIsVisible

```
ASBool AVWindowIsVisible (AVWindow win);
```

Description

Tests whether or not a window is being displayed on the screen.

Parameters

win	The window whose visibility is tested.

Return Value

true if the window is being displayed on the screen (even if it is currently obscured by another window), **false** otherwise.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVWindowBecomeKey
AVWindowHide
AVWindowShow

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVWindowMaximize

```
void AVWindowMaximize (AVWindow win, ASBool maximize);
```

Description

Maximizes the specified window. In Mac OS, this corresponds to calling the **ZoomWindow** Toolbox function.

Parameters

win	The window to maximize.
maximize	**true** if the window is maximized, **false** if it is returned to its non-maximized state.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVWindowNew

```
AVWindow AVWindowNew (AVWindowLayer layer, ASUns32 flags,
AVWindowHandler handler, ASExtension owner);
```

Description

Creates a new window and registers it with the Acrobat viewer.

Because Windows and UNIX use the platform's native window handling instead of the Acrobat viewer's **AVWindowHandler** mechanism (that is, the **AVWindowHandler**'s callbacks are never called on those platforms), there is no advantage to using **AVWindowNew**. Plug-in developers on those platforms should use **AVWindowNewFromPlatformThing** instead of this method.

Parameters

layer	The layer in which the window resides. In Mac OS, must be one of the **AVWindowLayer** constants. In Windows, all **AVWindows** are of type **AVWLfloating**, and **layer** is ignored.
flags	An OR of the values listed in **AVWindow Flags**.
handler	A structure containing the window handler's callback functions. Pass **NULL** in Windows and UNIX, because the Window handler's callbacks are unused on those platforms.
owner	The **gExtensionID** extension registering the window.

Return Value

The newly-created window.

Exceptions

genErrNoMemory

Notifications

None

Header File

AVCalls.h

Related Methods

AVWindowNewFromPlatformThing

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVWindowNewFromPlatformThing

```
AVWindow AVWindowNewFromPlatformThing (AVWindowLayer layer,
ASUns32 flags, AVWindowHandler handler, ASExtension owner,
void* platformThing);
```

Description

Creates a new window from a platform-specific structure and registers it with the Acrobat viewer.

If a user creates an **HWND** or a **WindowPtr** and does not register it with the viewer via **AVWindowNewFromPlatformThing**, it should not be allowed to persist across event loops (that is, in Mac OS, it should be system-modal).

Windows and UNIX use the platform's native window handling instead of the Acrobat viewer's **AVWindowHandler** mechanism (that is, the AVWindowHandler's callbacks are *never* called on those platforms). Plug-in developers on those platforms should use **AVWindowNewFromPlatformThing** instead of **AVWindowNew**, since they have to create the window using platform-specific code anyway.

Parameters

layer	One of the **AVWindowLayer** constants, specifying the layer in which the window is located. For Mac OS, see **AVWindowNew**. **layer** is ignored in Windows, because the equivalent information was specified when the platform thing was created.
flags	For Mac OS, an OR of the **AVWindow Flags**. It is the responsibility of the Macintosh plug-in developer to ensure that **flags** matches any attributes of the "platform-thing" window; the Acrobat viewer cannot determine **flags** from the window itself. **flags** is ignored in Windows and UNIX, because the equivalent information was specified when the platform thing was created.
handler	A structure containing the window handler's callback functions. Pass **NULL** in Windows and UNIX, because the Window handler's callbacks are unused on those platforms.
owner	The **gExtensionID** extension registering the window.
platformThing	A platform-specific object (**WindowPtr** in Mac OS, an **HWND** in Windows, and a **Widget** in UNIX) that will be used for this window.

Return Value

The newly-created window.

Exceptions

genErrNoMemory

Notifications

None

Header File

AVCalls.h

Related Methods

AVWindowNew
AVWindowGetPlatformThing

Example

```
/* Under Windows, to do a modal dialog correctly, you want to add the
following to the WM_INITDIALOG portion of your dialog. */
avw = AVWindowNewFromPlatformThing(AVWLmodal, 0, NULL, gExtensionID,
hWnd);
AVAppBeginModal(avw);

/* You'll also want to add the following to the WM_DESTROY portion of
the dialog. */
AVAppEndModal();
AVWindowDestroy(avw);
```

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVWindowResignKey

```
void AVWindowResignKey (AVWindow win);
```

Description

Use this method when you want **win** to resign its key window status. Another window might pick up key window status as a result. You must first call **AVWindowSetWantsKey** with a value of **false** for the **wantsKey** parameter or your window may immediately become the key window again.

UNIX users: This method is a no-op.

Parameters

win	The window resigning key window status.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVWindowBecomeKey
AVWindowSetWantsKey

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVWindowSetFrame

```
void AVWindowSetFrame (AVWindow win, const AVRect* rect);
```

Description

Sets the window's frame, which specifies its size and location on the screen.

Parameters

win	The window whose frame is set.
rect	Pointer to a rectangle specifying the window's frame rectangle, specified in global screen coordinates. In Mac OS, the frame includes only the window's content region. In Windows, it includes the entire window (content region, title bar, and so forth).

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVWindowGetFrame
AVWindowGetInterior

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVWindowSetMinMaxSize

```
void  AVWindowSetMinMaxSize (AVWindow win,
const AVRect* rect);
```

Description

Sets the minimum and maximum size of the window.

Top and **left** in **rect** are for minimum size; **bottom** and **right** are for maximum size.

Parameters

win	The window whose size is set.
rect	Pointer to a rectangle specifying the window's size, specified in device space coordinates.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVWindowGetMinMaxSize

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00040005** or higher.

AVWindowSetOwnerData

```
void AVWindowSetOwnerData (AVWindow win, void* newData);
```

Description

Sets a window's owner data. The owner data is private data for the use of the window's creator. For example, if a plug-in uses its own class library, it might use the owner data field to store a pointer to the object owning the **AVWindow**.

Parameters

win	The window whose owner data is set.
newData	Pointer to the new owner data for **win**.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVWindowGetOwnerData

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVWindowSetTitle

```
void AVWindowSetTitle (AVWindow win, const char* newTitle);
```

Description

Sets the title to display in the specified window's title bar. This method cannot be used to set the title of the window in which the Acrobat viewer normally opens a PDF file; it can only be used to set the title of an **AVWindow** created by a plug-in. To set the title of a window in which the Acrobat viewer opens a PDF file, you must replace **AVDocOpenFromFileWithParams** and pass the window title in **tempTitle**.

Parameters

win	The window whose title is set.
newTitle	The title to set for **win**.

Return Value

None

Exceptions

genErrNoMemory

Notifications

None

Header File

AVCalls.h

Related Methods

AVWindowGetTitle

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVWindowSetWantsKey

```
void AVWindowSetWantsKey (AVWindow win, ASBool wantsKey);
```

Description

Sets or clears a flag indicating that **win** wants to become the key window. This corresponds to the **AVWIN_WANTSKEY** flag that can be specified when the window is created using **AVWindowNew**.

Once this flag is set, the Acrobat viewer may, at any time, make this window the key window. This occurs, for example, if the current key window closes and this window moves to the front. If **WantKey** is **false**, this window will not become the key window. If the window is already the key window, however, simply invoking **AVWindowSetWantsKey** with **wantsKey** set to **false** will not cause it to resign key window status; to do that, you must call **AVWindowResignKey**.

Parameters

win	The window that wants to become the key window.
wantsKey	If **true**, **win** is willing to become the key window, **false** otherwise.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVWindowBecomeKey
AVWindowResignKey

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVWindowShow

```
void AVWindowShow (AVWindow win);
```

Description

Shows the specified window.

Parameters

win	The window to show.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVWindowHide
AVWindowIsVisible

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

AVWindowUserClose

```
ASBool AVWindowUserClose (AVWindow win, ASBool quitting);
```

Description

Simulates a user's click on a window's box. This calls the **AVWindowWillCloseProc** of **win**'s **AVWindowHandler**.

Parameters

win	The window to close.
quitting	If **true**, assume the application is trying to quit. If **false**, assume the user clicked on the window's close box.

Return Value

true if the window was closed, **false** if the window handler's **AVWindowWillCloseProc** aborted the close by returning **false**.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

AVWindowCenter
AVWindowHide

Availability

Available if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

Cos Layer Methods

Cos Layer Methods

CosArray

CosArrayGet

```
CosObj CosArrayGet (CosObj array, ASInt32 index);
```

Description

Gets the specified element from an array.

Parameters

array	The array from which an element is obtained.
index	The array element to obtain. The first element in an array has an index of zero.

Return Value

The Cos object occupying the **index**th element of **array**. Returns a **NULL** Cos object if **index** is outside the array bounds.

Exceptions

None

Notifications

None

Header File

CosCalls.h

Related Methods

CosArrayLength
CosArrayPut
CosArrayInsert

Example

```
ASInt32 i;
CosObj array, arrayEntry;

for(i = 0 ;i <=CosArrayLength(array)-1;i++)
{
     arrayEntry = CosArrayGet(cosArray, i);
     /*do something with arrayEntry */
     ...
}
```

Availability

Available if **PI_COS_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

CosArrayInsert

```
void CosArrayInsert (CosObj array, ASInt32 pos, CosObj obj);
```

Description

Inserts an object into an array.

Parameters

array	The array into which the object is inserted.
pos	The location in the array to insert the object. The object is inserted before the specified location. The first element in an array has a **pos** of zero. If **pos** ≥ **CosArrayLength(array)**, appends **obj** to **array** (increasing the array length by 1).
obj	The object to insert.

Return Value

None

Exceptions

Raises an exception if object to insert is a direct object that is already contained in another object or if object to insert belongs to another document.

Notifications

None

Header File

CosCalls.h

Related Methods

CosArrayLength
CosArrayRemove
CosArrayGet

Availability

Available if **PI_COS_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

CosArrayLength

```
ASInt32 CosArrayLength (CosObj array);
```

Description

Gets the number of elements in **array**.

Parameters

array	The array for which the number of elements is determined.

Return Value

The number of elements in **array**.

Exceptions

File access, memory, object type.

Notifications

None

Header File

CosCalls.h

Related Methods

Numerous

Example

```
if(CosArrayLength(cosArray) > MAXLEN)
     AVAlertNote("Array too long");
```

Availability

Available if **PI_COS_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

CosArrayPut

```
void CosArrayPut (CosObj array, ASInt32 index, CosObj obj);
```

Description

Puts the specified object into the specified location in an array. The array is extended as much as necessary and **NULL** objects are stored in empty slots. Sets the **PDDocNeedsSave** flag (see **PDDocSetFlags**) flag of **array**'s CosDoc if array is indirect or is a direct non-scalar object with an indirect composite object at the root of its container chain.

Parameters

array	The array in which **obj** is stored.
index	The location in **array** to store **obj**. The first element of an array has an index of zero.
obj	The Cos object to insert into **array**.

Return Value

None

Exceptions

Raises an exception if object to insert is a direct object that is already contained in another object or if object to insert belongs to another document.

Notifications

None

Header File

CosCalls.h

Related Methods

CosArrayLength
CosArrayGet
CosArrayInsert

Availability

Available if **PI_COS_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

CosArrayRemove

```
void CosArrayRemove (CosObj array, CosObj obj);
```

Description

Finds the first element, if any, equal to the specified object and removes it from the array. **CosObjEqual** is used to determine whether or not an array element is equal to the specified object.

The array is compressed after removing the element. The compression is accomplished by moving each element following the deleted element to the slot with the next smaller index and decrementing the **array**'s length by 1.

Because the array is automatically compressed when an element is removed, it is not safe to call **CosArrayRemove** within your callback procedure for **CosObjEnum**.

Parameters

array	The array from which **obj** is removed.
obj	The object to remove.

Return Value

None

Exceptions

File access, memory, object type.

Notifications

None

Header File

CosCalls.h

Related Methods

CosArrayInsert

Availability

Available if **PI_COS_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

CosArrayRemoveNth

```
void CosArrayRemoveNth (CosObj array, ASInt32 pos);
```

Description

Checks whether the position is within the array bounds and then removes it from the array and moves each subsequent element to the slot with the next smaller index and decrements the array's length by 1. Sets the "dirty" flag of array's **CosDoc**.

Parameters

array	The **CosArray** to remove the member from.
pos	The index for the array member to remove. Array indices start at 0.

Return Value

None

Exceptions

None

Notifications

None

Header File

CosCalls.h

Related Methods

CosArrayRemove

Availability

Available if **PI_COS_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

CosNewArray

```
CosObj CosNewArray (CosDoc dP, ASBool indirect,
ASInt32 nElements);
```

Description

Creates and returns a new array Cos object.

Parameters

dP	The document in which the array is used.
indirect	If **true**, creates the array as an indirect Cos object, and sets the document's **PDDocNeedsSave** flag (see **PDDocSetFlags**). If **false**, creates the array as a direct object.
nElements	The number of elements that will be in the array. **nElements** is only a hint; Cos arrays grow dynamically as needed.

Return Value

The newly-created array Cos object.

Exceptions

Raises an exception if storage is exhausted or file access fails.

Notifications

None

Header File

CosCalls.h

Related Methods

CosObjDestroy
CosArrayGet
CosArrayInsert
CosArrayLength
CosArrayPut
CosArrayRemove

Example

```
CosObj cosArray = CosNewArray(NULL, false,
     10);
```

Availability

Available if **PI_COS_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

CosBoolean

CosBooleanValue

```
ASBool CosBooleanValue (CosObj obj);
```

Description

Gets the value of the specified boolean object.

Parameters

obj	The boolean Cos object whose value is obtained.

Return Value

The value of **obj**.

Exceptions

Raises an exception if **obj** has the wrong Cos type. Also raises exceptions if storage is exhausted or file access fails.

Notifications

None

Header File

CosCalls.h

Related Methods

CosNewBoolean

Availability

Available if **PI_COS_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

CosNewBoolean

```
CosObj CosNewBoolean (CosDoc dP, ASBool indirect,
ASBool value);
```

Description

Creates a new boolean object associated with the specified document and having the specified value.

Parameters

dP	The document in which the boolean is used.
indirect	If **true**, creates the boolean object as an indirect object, and sets the document **dP**'s **PDDocNeedsSave** flag (see **PDDocFlags**). If **false**, creates the boolean as a direct object.
value	The value the new boolean will have.

Return Value

A Cos boolean object.

Exceptions

None

Notifications

None

Header File

CosCalls.h

Related Methods

CosBooleanValue
CosObjDestroy

Availability

Available if **PI_COS_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

CosDict

CosDictGet

```
CosObj CosDictGet (CosObj dict, ASAtom key);
```

Description

Gets the value of the specified key in the specified dictionary. Use **CosObjEnum** to list all keys in a dictionary.

This method can also be called with a stream object instead of a dictionary object. In that case, this method gets the value of the specified key from the stream's attributes dictionary.

Parameters

dict	The dictionary or stream from which a value is obtained.
key	The key whose value is obtained. A string can be converted to an **ASAtom** using **ASAtomFromString**. See the *PDF Reference* to obtain the names of keys in dictionary objects that are part of standard PDF, such as annotations or page objects. NOTE: Although a dictionary key is a name object in a PDF file and names begin with the slash character "/", the **key** parameter should not start with "/"—unless the key actually begins with "/".

Return Value

The object associated with the specified key. Returns a **NULL** Cos object if **key** is not present unless the desired **key** is AcroForm. In that case, a new AcroForm dictionary is created and returned.

Exceptions

None

Notifications

None

Header File

CosCalls.h

Related Methods

CosDictPut

CosDictKnown
CosStreamDict

Example

```
CosObj theDict, intObj;

intObj = CosDictGet(theDict,
     ASAtomFromString ("Key1"));
```

Availability

Available if **PI_COS_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

CosDictGetXAPMetadata

```
ASBool CosDictGetXAPMetadata (CosObj obj,
ASText* metadataASText);
```

Description

Gets the XAP metadata associated with a Cos dictionary or stream.

If there is XAP metadata, it is returned as an **ASText** in the output parameter **metadataASText**. The **ASText** returned becomes the property of the client, who is free to alter or destroy it.

NOTE: **CosDictGetXAPMetadata** will not attempt to verify that **obj** is one of the objects that is specified in the *PDF Reference* to allow XAP metadata.

Parameters

obj	A dictionary or stream **CosObj**.
metadataASText	*(Filled by the method)* The **ASText** object from which the XAP metadata will be obtained.

Return Value

True if **obj** has associated XAP metadata, false if it does not. Also returns false if **obj** is not a dictionary or stream. Returns **true** exactly when the Cos object **obj** has XAP metadata.

Exceptions

pdMetadataErrBadXAP
pdMetadataErrCouldntCreateMetaXAP

Notifications

None

Header File

PDMetadataCalls.h

Related Methods

CosDictSetXAPMetadata

Availability

Available if **PI_PDMETADATA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

CosDictKnown

```
ASBool CosDictKnown (CosObj dict, ASAtom key);
```

Description

Tests whether or not a specific key is found in the specified dictionary. Calling this method is equivalent to checking if the value returned from **CosDictGet** is a **NULL** Cos object.

Use **CosObjEnum** to obtain a list of all keys in a dictionary.

Parameters

dict	The dictionary in which to look for **key**. May be a dictionary or stream.
key	The key to find. A string can be converted to an **ASAtom** using **ASAtomFromString**. See the *PDF Reference* to obtain the names of keys in dictionary objects that are part of standard PDF, such as annotations or page objects. NOTE: Although a dictionary key is a name object in a PDF file and names begin with the slash character "/", the **key** parameter should not start with "/"—unless the key actually begins with "/".

Return Value

true if the value of a key is known (exists and is not **NULL**) in dict; **false** otherwise.

Exceptions

cosErrExpectedDict

Notifications

None

Header File

CosCalls.h

Related Methods

CosDictGet
CosDictPut

Example

```
CosObj myDict;

if (CosDictKnown(myDict, ASAtomFromString
     ("Optional") == true)
     {
           /* The key is in the dictionary. */
           ...
     }
     else
     {
           /* That key is not in the dictionary. */
           ...
     }
```

Availability

Available if **PI_COS_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

CosDictPut

```
void CosDictPut (CosObj dict, ASAtom key, CosObj val);
```

Description

Sets the value of a dictionary key, adding the key to the dictionary if it is not already present. Sets the **PDDocNeedsSave** flag (see **PDDocSetFlags**) of **dict**'s **CosDoc** if **dict** is indirect or is a direct non-scalar object with an indirect composite object at the root of its container chain.

This method can also be used with a stream object. In that case, the key–value pair is added to the stream's attributes dictionary.

Parameters

dict	The dictionary or stream in which a value is set.
key	The key whose value is set. A string can be converted to an **ASAtom** using **ASAtomFromString**. **key** must not contain any white space characters (for example, spaces or tabs). See the *PDF Reference* to obtain the names of keys in dictionary objects that are part of standard PDF, such as annotations or page objects. NOTE: Although a dictionary key is a name object in a PDF file and names begin with the slash character "/", the **key** parameter should not start with "/"—unless the key actually begins with "/".
val	The value to set.

Return Value

None

Exceptions

Raises an exception if object to insert is a direct object that is already contained in another object or if object to insert belongs to another document.

Notifications

None

Header File

CosCalls.h

Related Methods

CosDictGet
CosDictKnown
CosStreamDict

Example

```
CosObj dict, intObj;

CosDictPut(dict, ASAtomFromString("Key1"),
     intObj);
```

Availability

Available if **PI_COS_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

CosDictRemove

```
void CosDictRemove (CosObj dict, ASAtom key);
```

Description

Removes a key–value pair from a dictionary. Sets the **PDDocNeedsSave** flag (see **PDDocSetFlags**) of **dict**'s **CosDoc** if the dictionary is indirect or has an indirect composite object at the root of its container chain.

Because of the way in which key–value pairs are represented in memory, it is not safe to call **CosDictRemove** within your callback procedure for **CosObjEnum**.

Parameters

dict	The dictionary from which the key–value pair is removed.
key	The key to remove. A string can be converted to an **ASAtom** using **ASAtomFromString**. See the *PDF Reference* to obtain the names of keys in dictionary objects that are part of standard PDF, such as annotations or page objects. NOTE: Although a dictionary key is a name object in a PDF file and names begin with the slash character "/", the **key** parameter should not start with "/"—unless the key actually begins with "/".

Return Value

None

Exceptions

None

Notifications

None

Header File

CosCalls.h

Related Methods

CosDictGet
CosDictPut

Example

```
CosObj dict;

CosDictRemove(dict,
     ASAtomFromString("MyKey"));
```

Availability

Available if **PI_COS_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

CosDictSetXAPMetadata

```
void CosDictSetXAPMetadata (CosObj obj,
ASText metadataASText);
```

Description

Sets the XAP metadata associated with a Cos dictionary or stream.

Replaces the XAP metadata associated with the Cos object obj with the XAP metadata stored in **metadataASText**.

The contents of **metadataASText** must be well-formed XML and Resource Description Format (RDF) as defined by the W3C (see http://www.w3.org/RDF) that also forms valid XAP. **CosDictSetXAPMetadtata** will not destroy **metadataASText** or alter its text.

NOTE: **CosDictSetXAPMetadtata** will raise an exception if the user does not have permission to change the document.

NOTE: **CosDictSetXAPMetadtata** will not attempt to verify that obj is one of the objects that is specified in the *PDF Reference* to allow XAP metadata.

Parameters

obj	The dictionary or stream Cos object whose associated XAP metadata is to be set.
metadataASText	The **ASText** object containing the metadata to be associated with **obj**.

Return Value

None

Exceptions

pdMetadataErrBadXAP

Notifications

None

Header File

PDMetadataCalls.h

Related Methods

CosDictGetXAPMetadata

Availability

Available if **PI_PDMETADATA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

CosNewDict

```
CosObj CosNewDict (CosDoc dP, ASBool indirect,
ASInt32 nEntries);
```

Description

Creates a new dictionary.

See the *PDF Reference* for information on dictionary objects that are part of standard PDF, such as annotations or page objects.

Parameters

dP	The document in which the dictionary is used.
indirect	If **true**, creates the dictionary as an indirect Cos object, and sets **dP**'s **PDDocNeedsSave** flag (see **PDDocFlags**). If **false**, creates the dictionary as a direct object.
nEntries	Number of entries in the dictionary. This value is only a hint—Cos dictionaries grow dynamically as needed.

Return Value

The newly-created dictionary Cos object.

Exceptions

Raises an exception if storage is exhausted or file access fails.

Notifications

None

Header File

CosCalls.h

Related Methods

CosDictGet
CosDictKnown
CosDictPut
CosDictRemove
CosObjDestroy

Example

```
PDDoc d;
CosDoc cd;
CosObj dict;

cd = PDDocGetCosDoc(d);
dict = CosNewDict(cd, false, 2);
```

Availability

Available if **PI_COS_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

CosDoc

CosDocClose

```
void CosDocClose (CosDoc cosDoc);
```

Description

Closes a Cos document. You should only call this method with a document obtained via **CosDocOpenWithParams** to release resources used by the Cos document.

Parameters

cosDoc	The document to close.

Return Value

None

Exceptions

None

Notifications

None

Header File

CosCalls.h

Related Methods

CosDocOpenWithParams

Availability

Available if **PI_COS_VERSION** (in PIRequir.h) is set to **0x00020002** or higher.

CosDocCreate

```
CosDoc CosDocCreate (ASUns32 createFlags);
```

Description

Creates an empty Cos document.

Parameters

createFlags	An OR of the values listed in **CosDocCreate Flags** specifying how to create the document.

Return Value

An empty Cos document.

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

CosDocSaveToFile

Availability

Available if **PI_COS_VERSION** (in PIRequir.h) is set to **0x00020002** or higher.

CosDocEnumEOFs

```
ASBool CosDocEnumEOFs (CosDoc cosDoc, CosDocEnumEOFsProc proc,
void* clientData);
```

Description

Calls **CosDocEnumEOFsProc** for each EOF in a given **CosDoc**.

Parameters

cosDoc	The **CosDoc** in which the EOF's are enumerated.
proc	The **CosDocEnumEOFsProc** to call for each EOF.
clientData	Pointer to user-supplied data to pass to **proc** each time it is called.

Return Value

true if all of the calls to **proc** return **true**. **false** as soon as a call to **proc** returns **false**.

Exceptions

Raises an exception if storage is exhausted or file access fails.

Notifications

None

Header File

CosCalls.h

Related Methods

CosDocEnumIndirect

Example

```
static ACCB1 ASBool ACCB2 myCosObjEnumDictProc(CosDoc cosDoc,
ASInt32 fileOffset, void* clientData);
{
     ...process this portion of the CosDoc...
     return true;
}
...
PDDoc myPdDoc;

CosDocEnumEOFsProc myEnumCB =
ASCallbackCreateProto(CosDocEnumEOFsProc,
     &myCosObjEnumDictProc);
CosDocEnumEOFs(PDDocGetCosDoc(myPdDoc),
     myEnumCB, &clientData);
```

Availability

Available if **PI_COS_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

CosDocEnumIndirect

```
ASBool CosDocEnumIndirect (CosDoc dP, CosObjEnumProc proc,
void* clientData);
```

Description

Enumerates all the indirect objects of a given **CosDoc**.

The objects are enumerated in no particular order. Successive enumerations of the same Cos document are not guaranteed to enumerate objects in the same order.

CosDocEnumIndirect does not enumerate “missing” objects. For example, a document might include a reference “23 0 R” without a definition “23 0 obj ... endobj”. This is equivalent to defining that object to be **NULL**, but the enumeration procedure is not called with the **NULL** value in this case. If an indirect object is explicitly defined to be **NULL**, for example, “47 0 obj **NULL** endobj”, the enumeration procedure is called with the **NULL** value.

Parameters

dP	The **CosDoc** whose indirect objects are enumerated.
proc	User-supplied callback to call for each indirect object in **dP**. Enumeration ends when **proc** returns **false** or all indirect objects have been enumerated. The **value** parameter returned in **proc** is always the **NULL** Cos object.
clientData	Pointer to user-supplied data to pass to **proc** each time it is called.

Return Value

true if all of the calls to **proc** returned **true**. **false** as soon as a call to **proc** returns **false**.

Exceptions

Raises an exception if storage is exhausted or file access fails.

Also re-raises any exception that **proc** raises.

Notifications

None

Header File

CosCalls.h

Related Methods

CosObjEnum

Example

```
static ACCB1 ASBool ACCB2
     myCosObjEnumProc(CosObj obj,
     CosObj value, void* clientData)
{
     ...process the indirect object...
     return true;
}
...
PDDoc myPdDoc;

CosObjEnumProc myEnumCB =
     ASCallbackCreateProto(CosObjEnumProc,
     &myCosObjEnumProc);
CosDocEnumIndirect(
     PDDocGetCosDoc(myPdDoc), myEnumCB,
     &clientData);
```

Availability

Available if **PI_COS_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

CosDocGetID

```
ASBool CosDocGetID (CosDoc dP, ASUns8** pInstanceID,
ASUns8** pPermaID, ASInt32* instIDLength,
ASInt32* permIDLength));
```

Description

Returns two ID byte arrays identifying the **CosDoc**. The client should copy these arrays before making the next call to Acrobat.

Parameters

dP	The **CosDoc** whose ID byte arrays are returned.
pInstanceID	*(Filled by the method)* The instance ID.
pPermaID	*(Filled by the method)* The permanent ID.
instIDLength	The length of **pInstanceID**, in bytes.
permIDLength	The length of **pPermaID**, in bytes.

Return Value

true if the ID is returned, **false** otherwise.

Exceptions

None

Notifications

None

Header File

CosCalls.h

Related Methods

None

Availability

Available if **PI_COS_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

CosDocGetInfoDict

```
CosObj CosDocGetInfoDict (CosDoc dP);
```

Description

Gets the specified document's Info dictionary. In general, access the document's Info dictionary using **PDDocGetInfo** and **PDDocSetInfo** wherever possible.

Parameters

dP	The document whose Info dictionary is obtained.

Return Value

The document's Info dictionary Cos object.

Exceptions

None

Notifications

None

Header File

CosCalls.h

Related Methods

CosDocGetRoot
PDDocGetInfo
PDDocSetInfo

Availability

Available if **PI_COS_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

CosDocGetObjByID

```
CosObj CosDocGetObjByID (CosDoc dP, ASUns32 objNum);
```

Description

Gets the indirect **CosObj** with the latest generation number matching the specified local master index (ID). For indirect objects, the local master index is the same as the indirect object index that appears in the PDF file. Returns **CosNewNull** if there is no object with this ID.

Parameters

dP	The **CosDoc** to search for the matching Cos Object.
objNum	The local master index for the indirect Cos Object to return.

Return Value

The **CosObj** matching the specified local master index or **CosNewNull** if there is no object with this ID.

Exceptions

None

Notifications

None

Header File

CosCalls.h

Related Methods

CosObjGetID

Availability

Available if **PI_COS_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

CosDocGetRoot

```
CosObj CosDocGetRoot (CosDoc dP);
```

Description

Gets the Catalog (the root object) for the specified document. See Section 3.6.1 in the *PDF Reference* for a description of the Catalog.

Parameters

dP	The document whose Catalog is obtained.

Return Value

The document's Catalog dictionary Cos object.

Exceptions

None

Notifications

None

Header File

CosCalls.h

Related Methods

CosDocGetInfoDict

Availability

Available if **PI_COS_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

CosDocOpenWithParams

```
CosDoc CosDocOpenWithParams (CosDocOpenParams params);
```

Description

Opens a Cos document. The document does not need to be a PDF document. The client specifies a **fileSys** and **pathName** from which to open the document. The client may also specify a header string other than "%PDF-". For example, a client might want to open a private file type, for example, "%FDF-".

If the **doRepair** flag is set in the open flags, a minimal document can be opened. A minimal document contains the header string and a trailer dictionary. It may contain indirect objects before the trailer dictionary, and the trailer dictionary can refer to those objects. For example:

```
%FDF-1.0
1 0 obj
<<
/AcroForm <</This /Is /An /Example>>
>>
trailer
<<
/Root 1 0 R
>>
```

Parameters

params	Specifies how to open the document.

Return Value

A Cos document.

Exceptions

Various

Notifications

None

Header File

CosCalls.h

Related Methods

CosDocClose

Availability

Available if **PI_COS_VERSION** (in PIRequir.h) is set to **0x00020002** or higher.

CosDocSaveToFile

```
void CosDocSaveToFile (CosDoc cosDoc, ASFile asFile,
ASUns32 saveFlags, CosDocSaveParams saveParams);
```

Description

Saves a Cos document to a file handle. **CosDocSaveToFile** will not generate an XRef table in the saved file. If you want the XRef to be generated, then you have to use **CosDocSaveWithParams**, which generates the XRef table by default.

Parameters

cosDoc	Document to save.
asFile	File to which the document is written; must be open in write mode. This file is not necessarily position-able.
saveFlags	An OR of the values listed in **CosDocSave Flags** specifying how to save the document.
saveParams	Optional parameters for use when saving a document, as described in **CosDocSaveParams**.

Return Value

None

Exceptions

cosErrAfterSave
cosErrNeedFullSave
genErrBadParm

Notifications

None

Header File

CosCalls.h

Related Methods

CosDocCreate
CosDocSaveWithParams

Availability

Available if **PI_COS_VERSION** (in PIRequir.h) is set to **0x00020002** or higher.

CosDocSaveWithParams

```
void CosDocSaveWithParams (CosDoc cosDoc, ASFile asFile,
ASUns32 saveFlags, CosDocSaveParams saveParams);
```

Description

Saves a Cos document, optionally to a new file handle. Generates an XRef table by default.

Parameters

cosDoc	The **CosDoc** for the document to save.
asFile	*(Optional)* If saving to the same file, do not pass in an **ASFile**. If saving to a different file, specify the file to which the document is written; it must be open in write mode. If **NULL**, this method saves to the **ASFile** originally associated with the **CosDoc**.
saveFlags	A bit field composed of the **CosDocSave Flags** specifying how to save the document.
saveParams	(*Optional*) **CosDocSaveParams** parameters for use when saving the **CosDoc** document.

Return Value

None

Exceptions

cosErrAfterSave
cosErrNeedFullSave
genErrBadParm

Notifications

None

Header File

CosCalls.h

Related Methods

CosDocCreate
CosDocSaveToFile

Availability

Available if **PI_COS_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

CosDocSetDirty

```
void CosDocSetDirty (CosDoc cosDoc, ASBool isDirty);
```

Description

Sets a Cos document's dirty flag to a given boolean value.

Parameters

cosDoc	The Cos document whose dirty flag is set.
isDirty	**true** if dirty, **false** otherwise.

Return Value

None

Exceptions

None

Notifications

None

Header File

AVCalls.h

Related Methods

CosDocSaveToFile
CosDocSaveWithParams

Availability

Available if **PI_COS_VERSION** (in PIRequir.h) is set to **0x00020002** or higher.

CosFixed

CosFixedValue

```
ASFixed CosFixedValue (CosObj obj);
```

Description

Gets the value of the specified fixed number object.

It is legal to call **CosIntegerValue** on a fixed number object and **CosFixedValue** on an integer object. In fact, a fixed number object whose value is an integer is stored as an integer. If the document is saved and reopened, the object's type will be integer.

Parameters

obj	The object whose value is obtained.

Return Value

The value of **obj**.

Exceptions

Raises an exception if the given object has the wrong Cos type. Also raises exceptions if storage is exhausted or file access fails.

Notifications

None

Header File

CosCalls.h

Related Methods

CosIntegerValue
CosNewFixed

Availability

Available if **PI_COS_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

CosNewFixed

```
CosObj CosNewFixed (CosDoc dP, ASBool indirect,
ASFixed value);
```

Description

Creates a new fixed number object, associated with the specified document and having the specified **value**.

Parameters

dP	The document in which the fixed number is used.
indirect	If **true**, creates the fixed number object as an indirect object, and sets the document **dP**'s **PDDocNeedsSave** flag (see **PDDocFlags**). If **false**, creates the fixed number as a direct object.
value	The value the new fixed number will have. A fixed number object whose value is an integer is stored as an integer. If the document is saved and reopened, the object's type will be integer.

Return Value

A fixed Cos object.

Exceptions

None

Notifications

None

Header File

CosCalls.h

Related Methods

CosFixedValue
CosNewInteger
CosObjDestroy

Availability

Available if **PI_COS_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

CosInteger

CosIntegerValue

```
ASInt32 CosIntegerValue (CosObj obj);
```

Description

Gets the integer value of the specified number object. It is legal to call **CosIntegerValue** on a fixed number object and **CosFixedValue** on an integer object. In fact, a fixed number object whose value is an integer will be stored as an integer. If the document is saved and reopened, its type will be integer.

Parameters

obj	The integer object whose value is obtained.

Return Value

The value of **obj**.

Exceptions

Raises an exception if the given object has the wrong Cos type. Also raises exceptions if storage is exhausted or file access fails.

Notifications

None

Header File

CosCalls.h

Related Methods

CosFixedValue
CosNewFixed
CosNewInteger

Availability

Available if **PI_COS_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

CosNewInteger

```
CosObj CosNewInteger (CosDoc dP, ASBool indirect,
ASInt32 value);
```

Description

Creates a new integer object associated with the specified document and having the specified value.

Parameters

dP	The document in which the integer is used.
indirect	If **true**, creates the integer object as an indirect object, and sets the document **dP**'s **PDDocNeedsSave** flag (see **PDDocFlags**). If **false**, creates the integer as a direct object.
value	The value the new integer will have.

Return Value

An integer Cos object.

Exceptions

None

Notifications

None

Header File

CosCalls.h

Related Methods

CosIntegerValue
CosNewFixed
CosObjDestroy

Availability

Available if **PI_COS_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

CosName

CosNameValue

```
ASAtom CosNameValue (CosObj obj);
```

Description

Gets the value of the specified name object.

Parameters

obj	The object whose value is obtained.

Return Value

The **ASAtom** corresponding to the specified name object. **ASAtom** can be converted to a string using **ASAtomGetString**.

Exceptions

Raises an exception if **obj** has the wrong type, or it is an invalid object. Also raises exceptions if storage is exhausted or file access fails.

Notifications

None

Header File

CosCalls.h

Related Methods

CosNewName

Example

```
ASAtom nameAtom = CosNameValue(cosObj);
if (nameAtom == ASAtomFromString("Roger"))
{
     ...
}
```

Availability

Available if **PI_COS_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

CosNewName

```
CosObj CosNewName (CosDoc dP, ASBool indirect, ASAtom name);
```

Description

Creates a new name object associated with the specified document and having the specified value.

Parameters

dP	The document in which the new name is used.
indirect	If **true**, creates the name as an indirect object, and sets the document's **PDDocNeedsSave** flag (see **PDDocFlags**) flag. If **false**, creates the name as a direct object.
name	The **ASAtom** corresponding to the name to create. **name** must not contain any white space characters (for example, spaces or tabs). A C string can be converted to an **ASAtom** using **ASAtomFromString**.

Return Value

The newly-created name Cos object.

Exceptions

None

Notifications

None

Header File

CosCalls.h

Related Methods

CosNameValue
CosObjDestroy

Availability

Available if **PI_COS_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

CosNull

CosNewNull

```
CosObj CosNewNull (void);
```

Description

Gets a **NULL** Cos object. For efficiency, the Acrobat viewer has only one **NULL** object, which is shared by all methods that request a **NULL** object. For this reason, the **NULL** object cannot be destroyed.

Parameters

None.

Return Value

A **NULL** Cos object.

Exceptions

None

Notifications

None

Header File

CosCalls.h

Related Methods

None

Example

```
dObj = CosDictGet(cosDict,
     ASAtomFromString("D"));
if (CosObjEqual(dObj, CosNewNull())
   AVAlertNote("Expected non-NULL value");
```

Availability

Available if **PI_COS_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

CosObj

CosObjCmp

```
ASInt32 CosObjCmp (CosObj obj1, CosObj obj2);
```

Description

Compares **CosObj**s.

Parameters

obj1	The first **CosObj** to compare.
obj2	The second **CosObj** to compare.

Return Value

```
/* First handle the special case CosNull since the value/gen/etc. are
meaningless and seemingly not guaranteed to be 0 for a null object */
if(t1 == CosNull) return t2 == CosNull ? 0 : -1;
/* compare the types */
if(t1 < t2) return -1;
if(t1 > t2) return 1;
/* compare the values */
if(obj1.value < obj2.value) return -1;
if(obj1.value > obj2.value) return 1;
/* compare the generation numbers */
if(obj1.gen < obj2.gen) return -1;
if(obj1.gen > obj2.gen) return 1;
/* compare indirectness */
if(IsObjIndirect(obj1)) return IsObjIndirect(obj2) ? 0 : 1;
return IsObjIndirect(obj2) ? -1 : 0;
```

Exceptions

None

Notifications

None

Header File

CosCalls.h

Related Methods

None

Availability

Available if **PI_COS_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

CosObjCopy

```
CosObj CosObjCopy (CosObj srcObj, CosDoc destDoc,
ASBool copyIndirect);
```

Description

Copies a **CosObj** from one document to another (or the same document).

Parameters

srcObj	The **CosObj** to copy.
destDoc	The **CosDoc** for the document into which the **CosObj** is copied.
copyIndirect	**true** if all indirectly-referenced objects from **srcObj** are copied to **destDoc**, **false** otherwise.

Return Value

The **CosObj** which has been copied to the destination document.

Exceptions

Raises an exception if storage is exhausted or file access fails.

Notifications

None

Header File

CosCalls.h

Related Methods

CosObjEqual

Availability

Available if **PI_COS_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

CosObjDestroy

```
void CosObjDestroy (CosObj obj);
```

Description

Destroys a Cos object. This method does nothing if **obj** is a **NULL** Cos object or a direct scalar Cos object.

If a dictionary is destroyed:

- all the direct objects in it are automatically destroyed
- the indirect objects in it are *not* destroyed

Parameters

obj	The object to destroy.

Return Value

None

Exceptions

None

Notifications

None

Header File

CosCalls.h

Related Methods

CosNewArray
CosNewBoolean
CosNewDict
CosNewFixed
CosNewInteger
CosNewName
CosNewStream
CosNewString

Availability

Available if **PI_COS_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

CosObjEnum

```
ASBool CosObjEnum (CosObj obj, CosObjEnumProc proc,
void* clientData);
```

Description

Enumerates the elements of a Cos object by calling a user-supplied procedure for each component of the object. See **CosObjEnum Actions** for a description of what this means for each Cos object type.

Parameters

obj	The object whose elements are enumerated.
proc	User-supplied callback to call for each element of **obj**. Enumeration ends if **proc** returns **false**. **proc** must not call **CosArrayRemove** (if **obj** is an array) or **CosDictRemove** (if **obj** is a dictionary).
clientData	Pointer to user-supplied data to pass to **proc** each time it is called.

Return Value

Returns the value that **proc** returned (that is, returns **true** if all the elements of the object were enumerated, **false** if enumeration was terminated at the request of **proc**).

Exceptions

Raises an exception if storage is exhausted or file access fails.

Notifications

None

Header File

CosCalls.h

Related Methods

CosArrayGet
CosDictGet
CosDocEnumEOFs
CosDocEnumIndirect

Example

```
static ACCB1 ASBool ACCB2
     myCosObjEnumDictProc(CosObj key,
     CosObj value, void* clientData)
{
     ...process the key–value pair...
     return true;
}

ASCallback myEnumCB =
     ASCallbackCreateProto(CosObjEnumProc,
     &myCosObjEnumDictProc);
CosObjEnum(cosobjDict, myEnumCB,
     &clientData);
```

Availability

Available if **PI_COS_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

CosObjEqual

```
ASBool CosObjEqual (CosObj obj1, CosObj obj2);
```

Description

Tests whether or not two Cos objects are equal.

Two indirect or non-scalar Cos objects are equal if they have the same generation number (see Section 3.2.9 in the *PDF Reference*), the same type, and reference the same object.

Two direct scalar Cos objects are equal if they have the same value and the same type. The generation number of direct scalar objects is always zero.

Two **NULL** Cos objects are always equal.

Parameters

obj1, obj2	Objects to compare.

Return Value

true if **obj1** and **obj2** are equal, **false** otherwise.

Exceptions

Raises an exception if storage is exhausted or file access fails.

Notifications

None

Header File

CosCalls.h

Related Methods

None

Availability

Available if **PI_COS_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

CosObjGetDoc

```
CosDoc CosObjGetDoc (CosObj obj);
```

Description

Gets the **CosDoc** containing the specified object.

This is defined *only* for indirect or non-scalar objects.

Parameters

obj	The object whose **CosDoc** is obtained.

Return Value

The object's **CosDoc**.

Exceptions

Raises **cosErrInvalidObj** if the obj is not contained in a **CosDoc**, or if the object is a direct scalar object.

Notifications

None

Header File

CosCalls.h

Related Methods

PDDocGetCosDoc

Example

```
CosDoc myCosDoc = CosObjGetDoc(cosObj);
```

Availability

Available if **PI_COS_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

CosObjGetGeneration

```
ASUns16 CosObjGetGeneration (CosObj obj);
```

Description

Gets the generation number of an indirect Cos object. See Section 3.2.9 in the *PDF Reference* for more information.

Parameters

obj	The indirect **CosObj** for which the generation number is obtained. A **CosObj** can be determined to be indirect using **CosObjIsIndirect**.

Return Value

The generation number of **cosObj.**

Exceptions

Raises **cosErrInvalidObj** if the object is not valid or is not indirect.

Notifications

None

Header File

CosCalls.h

Related Methods

CosObjGetID
CosObjIsIndirect

Availability

Available if **PI_COS_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

CosObjGetID

```
ASUns32 CosObjGetID (CosObj obj);
```

Description

Gets the local master index for an indirect object. For indirect objects, the local master index is the same as the indirect object index that appears in the PDF file.

Parameters

obj	The indirect **CosObj** for which the ID is obtained. A **CosObj** can be determined to be indirect using **CosObjIsIndirect**.

Return Value

The ID of **obj.**

Exceptions

Raises **cosErrInvalidObj** if the object is not valid or is not indirect.

Notifications

None

Header File

CosCalls.h

Related Methods

CosDocGetObjByID
CosObjGetGeneration
CosObjIsIndirect

Availability

Available if **PI_COS_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

CosObjGetType

```
CosType CosObjGetType (CosObj obj);
```

Description

Gets an object's type.

Parameters

obj	The object whose type is obtained.

Return Value

The object's type. Must be one of the **Cos Object Types**.

Exceptions

Raises an exception if storage is exhausted or file access fails.

Notifications

None

Header File

CosCalls.h

Related Methods

None

Availability

Available if **PI_COS_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

CosObjHash

```
ASUns32 CosObjHash (CosObj obj);
```

Description

Gets a 32-bit hash-code for the given **CosObj**.

Two **CosObject**s with equal hash-codes are not necessarily equal, however. Use **CosObjEqual** to determine the equality of Cos objects.

Parameters

obj	The **CosObj** for which to obtain a hash-code.

Return Value

32-bit hash-code for the given **CosObj**, or **CosNewNull** if there is no object with this ID.

Exceptions

Raises an exception if storage is exhausted or file access fails.

Notifications

None

Header File

CosCalls.h

Related Methods

CosObjEqual

Availability

Available if **PI_COS_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

CosObjIsIndirect

```
ASBool CosObjIsIndirect (CosObj obj);
```

Description

Tests whether or not an object is indirect.

Parameters

obj	The object to test.

Return Value

true if **obj** is indirect, **false** if **obj** is direct.

Exceptions

None

Notifications

None

Header File

CosCalls.h

Related Methods

None

Example

```
if(CosObjIsIndirect(cosObj)) {
     /* Process indirect objects only */
     ...
}
```

Availability

Available if **PI_COS_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

CosStream

CosNewStream

```
CosObj CosNewStream (CosDoc dP, ASBool indirect, ASStm stm,
ASInt32 stmStartPos, ASBool stmDataIsDecoded,
CosObj attributesDict, CosObj encodeParms,
ASInt32 decodeLength);
```

Description

Creates a new Cos stream, using data from an existing **ASStm.** In the process of creating the Cos stream, the **ASStm**'s data is copied, so **stm** may be closed after **CosNewStream** returns.

You cannot call **CosStreamPos** on a stream created with **CosNewStream** until the file has been saved.

NOTE: When passing unencoded data to **CosNewStream** and specifying an encoding filter, the **encodeParms** parameter is optional for all filters except **DCTDecode**. The **DCTDecode** encoder requires that the Colors, Rows, and Columns parameters are passed in the **encodeParms** dictionary.

Parameters

dP	The Cos document in which the newly-created stream will be used.
indirect	Must always be **true**, specifying that the Cos stream is created as an indirect object. This also sets the document's **PDDocNeedsSave** flag (see **PDDocFlags**).
stm	The data to put into the stream. The user is responsible for closing **stm** after **CosNewStream** returns. **stm** can come from a file (**ASFileStmRdOpen**), from memory (**ASMemStmRdOpen**), or an arbitrary procedure (**ASProcStmRdOpen**).

stmStartPos	Specifies whether or not the stream is seek-able. If the stream is seek-able, also specifies the offset into **stm** from which data reading starts. The sign of **stmStartPos** specifies whether or not the stream is seek-able. A positive sign (or a value of zero) implies a seek-able stream and a negative sign implies a non-seek-able stream. **ASFileStmRdOpen** and **ASMemStmRdOpen** always provide seek-able streams, while **ASProcStmRdOpen** always provides a non-seek-able stream. If you use **ASProcStmRdOpen** to create the **ASStm**, but the sign of **stmStartPos** indicates that the stream is seek-able, an exception is raised. If the stream is seek-able, the absolute value of **stmStartPos** specifies the byte offset to seek to before reading data. Specifying a value of zero seeks to the beginning of the file, while a nonzero value allows you, for example, to skip header bytes in **stm**. If the stream is *not* seek-able, the magnitude of **stmStartPos** is ignored, and data is read starting at the current position.
stmDataIsDecoded	Determines whether or not the data in **stm** should be passed through the filters specified in **attributesDict** when copied to the Cos stream. **stmDataIsDecoded** should be **false** if the data has been encoded by the filters specified by **attributesDict**. If the data has been decoded (or never encoded), **stmDataIsDecoded** should be **true**. If there are no filters, **stmDataIsDecoded** should be **true** if the stream length is specified by **decodeLength** and **false** if it is not. If **stmDataIsDecoded** is **true**, the length of the decoded stream data should be specified in **decodeLength**. In general, **stmDataIsDecoded** should be set to **true**. An exception would be if **stm** has been received from a fax modem and is already CCITT group 4 encoded.

attributesDict	A dictionary containing stream attributes, such as the length of the stream and a list of filters to apply to the data, as defined in Section 3.2.7 in the *PDF Reference.* The attributes dictionary must have been created as a *direct* (not indirect) object. The value of the **Filter** entry of the attributes dictionary can be either the name of a single decode filter or an array of decode filter names. Specify multiple filters in the order they should be applied to decode the data. Because of subtle interactions between **decodeLength** and the **Length** key in **attributesDict**, it is safest to let **CosNewStream** calculate the stream length. The easiest way to do this is to omit the **Length** key from **attributesDict**, or simply pass a **NULL** Cos object for **attributeDict** if you do not need it for other reasons. If you decide to create a **Length** key in **attributesDict**, its value must be an indirect integer Cos object if the stream's length is not known. It may be either an indirect or a direct integer Cos object if you do know the stream's length (a direct integer is more efficient). **CosNewStream** uses a direct integer whenever possible if you let it create the **Length** key–value pair.
encodeParms	The parameters to be used by the filters when the data needs to be encoded before it is written to the file (that is, when **stmDataIsDecoded** is true). If no filter encode parameters are needed, **encodeParms** should be a **NULL** Cos object. If filter encode parameters are used, follow the structure for the value of the **DecodeParms** stream attribute described in Table 3.4 in the *PDF Reference*. Some filters use encode parameters that are *not* the same as the decode parameters. In this case, the decode parameters should be specified in **attributesDict** as the value of the **DecodeParms** key.
decodeLength	The amount of data in **stm** before it passed through any encoding filters. **decodeLength** is used only if **stmDataIsDecoded** is **true**. If **decodeLength = -1**, data is read from **stm** until its **filbuf** returns 0 bytes, indicating **EOF.** If **decodeLength >= 0**, at most **decodeLength** bytes are read from **stm**.

Return Value

The newly-created stream Cos object.

Exceptions

Raises **cosErrExpectedDict** if **attributesDict** is not a dictionary. Raises an exception if storage is exhausted. Raises an exception if **stmStartPos >= 0** (requesting that **stm** seek to the specified position before reading) and **stm** is not seek-able.

Raises **genErrGeneral** if **streamStartPos >= 0** (implying that it is seek-able), but the stream is not really seek-able. See the description of **stmStartPos** for more information about seek-able and non-seek-able streams.

Notifications

None

Header File

CosCalls.h

Related Methods

CosObjDestroy

Availability

Available if **PI_COS_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

CosStreamDict

```
CosObj CosStreamDict (CosObj stream);
```

Description

Gets a stream's attributes dictionary.

Parameters

stream	The stream whose attributes dictionary is obtained.

Return Value

The stream's attributes dictionary Cos object.

Exceptions

None

Notifications

None

Header File

CosCalls.h

Related Methods

CosStreamLength
CosStreamPos
CosDictGet
CosDictPut

Availability

Available if **PI_COS_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

CosStreamLength

```
ASInt32 CosStreamLength (CosObj stream);
```

Description

Gets the length of a Cos stream.

Parameters

stream	The stream whose length is obtained.

Return Value

The value of the **Length** key in the stream's attributes dictionary.

Exceptions

Raises an exception if the **Length** key is not found in the attributes dictionary or its value is not an integer.

Notifications

None

Header File

CosCalls.h

Related Methods

CosStreamDict
CosStreamPos

Availability

Available if **PI_COS_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

CosStreamOpenStm

```
ASStm CosStreamOpenStm (CosObj stream,
CosStreamOpenMode mode);
```

Description

Creates a new, non-seek-able **ASStm** for reading data from a Cos stream. The data in the Cos stream may be filtered and encrypted. After opening the Cos stream, data can be read from it into memory using **ASStmRead**. When reading is completed, close the stream using **ASStmClose**.

Parameters

stream	The Cos stream for which an **ASStm** is opened.
mode	Must be one of the **CosStreamOpenMode** values.

Return Value

The newly-opened **ASStm**.

Exceptions

Raises **genErrGeneral** if in the call to **CosNewStream**, **stmStartPos > 0** (that is, **stm** is requested to seek to the specified position before reading) and **stm** is not seek-able.

Notifications

None

Header File

CosCalls.h

Related Methods

ASStmRead
ASStmWrite
CosNewStream

Availability

Available if **PI_COS_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

CosStreamPos

```
ASInt32 CosStreamPos (CosObj stream);
```

Description

Gets the byte offset of the start of a Cos stream's data in the PDF file (that is, the byte offset of the beginning of the line following the "stream" token). Use this method to obtain the file location of any private data in a stream that you need to read directly rather than letting it pass through the normal Cos mechanisms. For example, a QuickTime video embedded in a PDF file.

CosStreamPos is only valid when called on a stream that is already stored in a PDF document. If the stream was created using **CosNewStream**, the new stream is stored in the document's temp file, and you *cannot* invoke **CosStreamPos** on it. After the file has been saved, you can use **CosStreamPos** on the stream.

Parameters

stream	The stream whose current position is obtained.

Return Value

The byte offset of the start of the Cos stream's data in the PDF file.

Exceptions

Raises **cosErrInvalidObj** if the stream object has not yet been saved to the PDF file. In other words, before you can call **CosStreamPos** on a newly-created stream, you must first save the PDF file.

Notifications

None

Header File

CosCalls.h

Related Methods

CosStreamDict
CosStreamLength

Availability

Available if **PI_COS_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

CosString

CosCopyStringValue

```
char* CosCopyStringValue (CosObj obj, ASInt32* nBytes);
```

Description

Returns a newly allocated buffer containing a copy of the Cos object's string value. Upon return **nBytes** will contain the number of bytes in the original Cos string. **CosCopyStringValue** will never return **NULL**; it will raise an exception instead. The client is responsible for freeing the result by calling **ASfree**.

CosCopyStringValue allocates extra memory past the end of the string and writes zeros into these extra bytes to ensure that the string will be null-terminated whether it's viewed as a UTF-16 (Unicode) string or as a C string. These bytes are not included in the number returned in **nBytes**). If the Cos string has **0** length, **nBytes** will be 0, and a pointer to newly allocated memory containing some zero bytes will be returned (that is, **CosCopyStringValue** will still return a null-terminated string but with zero length).

NOTE: In general, the returned value is not a null-terminated C string. Cos string objects are binary data and can contain any arbitrary byte sequence, including embedded **NULL** characters. Standard C string-handling functions may not work as expected.

Parameters

obj	The Cos object whose string value is copied and returned.
nBytes	*(Filled by the method)* The length of the original Cos string in bytes. Can be **NULL** if you don't care how many bytes were in the original string.

Return Value

A copy of the Cos object's string value or an exception. Will never return **NULL**.

Exceptions

If insufficient memory is available, **CosCopyStringValue** will raise an out-of-memory exception. Can also raise any exception that **CosStringValue** can raise.

Notifications

None

Header File

CosCalls.h

Related Methods

CosStringValueSafe

Availability

Available if **PI_COS_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

CosNewString

```
CosObj CosNewString (CosDoc dP, ASBool indirect, char* str,
ASInt32 nBytes);
```

Description

Creates and returns a new Cos string object.

Parameters

dP	The document in which the string is used.
indirect	If **true**, creates the string as an indirect object, and sets the document **dP**'s **PDDocNeedsSave** flag (see **PDDocFlags**). If **false**, creates the string as a direct object.
str	The value that the new string will have. It is *not* a C string, since Cos strings can contain **NULL** characters. The data in **str** is copied, that is, if **str** was dynamically allocated, it can be freed after this call.
nBytes	The length of **str**.

Return Value

The newly-created string Cos object.

Exceptions

Raises an exception if storage is exhausted or file access fails.

Notifications

None

Header File

CosCalls.h

Related Methods

CosStringValue
CosObjDestroy

Availability

Available if **PI_COS_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

CosStringGetHexFlag

```
ASBool CosStringGetHexFlag (CosObj cosObj);
```

Description

Gets the hex flag of the **CosString**. The hex flag specifies whether the **CosString** should be written out as hex when writing the Cos Object to file.

Parameters

cosObj	The **CosString** for which the hex flag is obtained.

Return Value

The current value of the flag.

Exceptions

cosErrExpectedString

Notifications

None

Header File

CosCalls.h

Related Methods

CosStringSetHexFlag

Availability

Available if **PI_COS_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

CosStringSetHexFlag

```
ASBool CosStringSetHexFlag (CosObj cosObj, ASBool setHex);
```

Description

Sets the hex flag of the **CosString**. The hex flag specifies whether the **CosString** should be written out as hex when writing the Cos Object to file.

Parameters

cosObj	The **CosString** for which the hex flag is set.
setHex	The value to set for the flag.

Return Value

The current value of the flag (after it is set).

Exceptions

cosErrExpectedString

Notifications

None

Header File

CosCalls.h

Related Methods

CosStringGetHexFlag

Availability

Available if **PI_COS_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

CosStringValue

```
char* CosStringValue (CosObj obj, ASInt32* nBytes);
```

Description

Gets the value of string Cos object, and the string's length.

NOTE: The pointer returned from this method is not guaranteed to be valid if **CosStringValue** is called again. It is recommended that you use **CosStringValueSafe** or **CosCopyStringValue** instead; these methods place the string into a user-allocated buffer.

NOTE: The plug-in should immediately copy the returned string. This cannot be emphasized enough. The memory pointed to be the return value may become invalid if *any* memory-allocating calls are made. In particular, in a sequence such as:

```
str1 = CosStringValue(...));
str2 = CosStringValue(...);
```

the contents of str1 may be invalid by the time the second CosStringValue call returns. It is very easy to write code that looks like this and it will work most of the time but eventually it will trigger a bug.

NOTE: The returned value is not a C-style string. Cos string objects can contain NULL chars. Standard C string-handling functions may not work as expected.

Parameters

obj	The object whose value is obtained.
nBytes	*(Filled by the method)* The length of **str**, in bytes.

Return Value

The value of **obj**.

Exceptions

Raises an exception if the specified object has the wrong type, or if it is an invalid object.

Notifications

None

Header File

CosCalls.h

Related Methods

CosNewString

Example

```
ASInt32 len;
char* p;

p = CosStringValue(strCos, &len);
```

Availability

Available if **PI_COS_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

CosStringValueSafe

```
char* CosStringValueSafe(CosObj obj, char* buffer,
ASInt32 bufferLen, ASInt32 *nBytes);
```

Description

Copies the Cos object's string value into the buffer, ensuring that the buffer will not be overrun. Upon return, **nBytes** will contain the number of bytes in the original Cos string (which may be more than the buffer could hold). If **buffer** is **NULL** or **bufferLen** is **0**, **CosStringValueSafe** will compute **nBytes** but will not copy any information into the buffer. If the method succeeds, it will return the value of **buffer**. If the Cos string was shorter than **bufferLen**, the remaining bytes of the buffer will have undefined values.

NOTE: The result will NOT be null-terminated!

NOTE: In general, the returned value is not a null-terminated C string. Cos string objects are binary data and can contain any arbitrary byte sequence, including embedded **NULL** characters. Standard C string-handling functions may not work as expected.

Parameters

obj	The Cos object whose string value is copied.
buffer	The buffer into which the Cos string value is copied or **NULL**.
bufferLen	The length of **buffer** or 0.
nBytes	*(Filled by the method)* The length of the original Cos string in bytes (which may be more than the **buffer** could hold).

Return Value

A copy of the Cos string value or an exception. Will never return **NULL**.

Exceptions

Will raise a bad-parameter exception if **bufferLen** is less than 0, or **nBytes** is **NULL**. Can also raise any exception that **CosStringValue** can raise.

Notifications

None

Header File

CosCalls.h

Related Methods

CosCopyStringValue

Availability

Available if **PI_COS_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

Encryption/Decryption

CosCryptGetVersion

```
ASInt32 CosCryptGetVersion ();
```

Description

Gets the current version number of the encryption algorithm supported.

Return Value

The current version number of encryption supported.

Exceptions

None

Notifications

None

Header File

`CosCalls.h`

Related Methods

CosDecryptGetMaxKeyBytes
CosEncryptGetMaxKeyBytes

Availability

Available if **PI_COS_VERSION** (in `PIRequir.h`) is set to **0x00040005** or higher.

CosDecryptData

```
void CosDecryptData (void* src, ASInt32 len, void* dst,
char* cryptData, ASInt32 cryptDataLen);
```

Description

Decrypts data in a buffer using the specified encryption key. The standard Acrobat viewer encryption/decryption algorithm (RC4 from RSA Data Security, Inc.) is used.

Parameters

src	The buffer containing the data to decrypt.
len	The number of bytes in **src**.
dst	*(Filled by the method)* The buffer into which the decrypted data will be placed. This may point to the same location as **src**.
cryptdata	The encryption key.
cryptDataLen	Length of the encryption key, in bytes. **cryptDataLen** cannot be greater than 5 bytes.

Return Value

None

Exceptions

Raises **genErrNoMemory** if memory is exhausted. Also raises an exception if encryption encounters an internal error.

Notifications

None

Header File

CosCalls.h

Related Methods

CosEncryptData

Availability

Available if **PI_COS_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

CosDecryptGetMaxKeyBytes

```
ASInt32 CosDecryptGetMaxKeyBytes (ASInt32 cryptVersion);
```

Description

Gets the maximum number of the decryption key length, in bytes, for the specified **cryptVersion**.

Parameters

cryptVersion	The Cos crypt version—the version of the algorithm that is used to encrypt and decrypt document data. **cryptVersion** equal to 0 is treated as **cryptVersion** equal to 1 to maintain backward compatibility.

Return Value

The maximum number of key length, in bytes, for the specified **cryptVersion**. If **cryptVersion** is not currently supported, returns **-1**.

Exceptions

None

Notifications

None

Header File

CosCalls.h

Related Methods

CosCryptGetVersion
CosEncryptGetMaxKeyBytes

Availability

Available if **PI_COS_VERSION** (in PIRequir.h) is set to **0x00040005** or higher.

CosEncryptData

```
void CosEncryptData (void* src, ASInt32 len, void* dst,
char* cryptData, ASInt32 cryptDataLen);
```

Description

Encrypts data in a buffer using the specified encryption key. The standard Acrobat viewer encryption/decryption algorithm (RC4 from RSA Data Security, Inc.) is used.

Parameters

src	The buffer containing the data to encrypt.
len	The number of bytes in **src**.
dst	*(Filled by the method)* The buffer into which the encrypted data will be placed. This may point to the same location as **src**.
cryptdata	The encryption key.
cryptDataLen	Length of the encryption key, in bytes. **cryptDataLen** cannot be greater than 5 bytes.

Return Value

None

Exceptions

Raises **genErrNoMemory** if memory is exhausted. Also raises an exception if encryption encounters an internal error.

Notifications

None

Header File

CosCalls.h

Related Methods

CosDecryptData

Availability

Available if **PI_COS_VERSION** (in **PIRequir.h**) is set to **0x00020000** or higher.

CosEncryptGetMaxKeyBytes

```
ASInt32 CosEncryptGetMaxKeyBytes (ASInt32 cryptVersion);
```

Description

Gets the maximum number of the encryption key length, in bytes, for the specified **cryptVersion**.

Parameters

cryptVersion	The Cos crypt version—the version of the algorithm that is used to encrypt and decrypt document data. **cryptVersion** equal to 0 is treated as **cryptVersion** equal to 1 to maintain backward compatibility.

Return Value

The maximum number of key length, in bytes, for the specified **cryptVersion**. If **cryptVersion** is not currently supported, it returns -1.

Exceptions

None

Notifications

None

Header File

CosCalls.h

Related Methods

CosCryptGetVersion
CosDecryptGetMaxKeyBytes

Availability

Available if **PI_COS_VERSION** (in PIRequir.h) is set to **0x00040005** or higher.

PD Layer Methods

PD Layer

PDWordFinder

PDXObject

General

PDApplyFunction

```
void PDApplyFunction (CosObj funcDict, const float inVals[],
float outVals[]));
```

Description

Given a **CosObj** that represents a function, apply the function to the supplied values. If the **CosObj** is not a function dictionary, this will raise **genErrBadParm**. Errors will also be raised due to malformed **CosObjs**.

Parameters

funcDict	**CosObj** representing a function.
inVals	Input values.
outVals	Output values.

Return Value

None

Exceptions

See above.

Notifications

None

Header File

PDCalls.h

Related Methods

None

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDDrawCosObjToWindow

```
void PDDrawCosObjToWindow (CosObj cosObj, void* window,
void* displayContext, ASBool isDPS, ASFixedMatrix* matrix,
ASFixedRect* updateRect, CancelProc cancelProc,
void* cancelProcClientData);
```

Description

Draws the specified stream of PDF marking operators into the specified window. This method is used for platform-independent drawing of graphics and text.

NOTE: **PDDrawCosObjToWindow** changes the following:

- the current page's CTM
- the zoom factor

NOTE: **PDDrawCosObjToWindow** dirties the PDF file.

Parameters

cosObj	The stream Cos object to draw into **window**. This stream can be created using **CosNewStream**.
	The stream's dictionary must contain a **Resources** key whose value is a dictionary specifying all the resources needed to draw the Cos object (including a **ProcSet** entry). Its structure and contents are the same as for the Resources dictionary for a **Page** object. See Section 3.7.2 in the *PDF Reference* for a description of a Page object's Resources dictionary.
	The stream's data is a sequence of PDF marking operators. See Appendix A in the *PDF Reference* for a description of these operators.
	A pseudocode example of the stream object is:
	`<< /Length 1000 /Filter [...filters...] /Resources <<`
	`/ProcSet [ /PDF /Text ]`
	`/Font <</F5 6 0 R /F9 12 0 R>> >>`
	`>>`
	`stream`
	`...stream data...`
	`endstream`

window	Pointer to a platform-dependent window object (**WindowPtr** or **CWindowPtr** in Mac OS, **HWND** in Windows). In Mac OS, to draw into an off screen GWorld, pass **NULL** in **window** and pass the **GWorldPtr** in **displayContext**. In Windows, to draw into an offscreen DC, pass **NULL** for **window**.

displayContext	Pointer to a platform-dependent display context structure (**GWorldPtr** in Mac OS, **hDC** in Windows). In Mac OS, **displayContext** is ignored if **window** is non-**NULL**.
isDps	Currently unused. Always set to **false**.
matrix	Pointer to a matrix to concatenate onto the default page matrix. It is useful for scaling and for converting from page to window coordinates.
updateRect	Pointer to a rectangle, specified in user space coordinates. Any objects outside of **updateRect** will not be drawn. All objects are drawn if **updateRect** is **NULL**.
cancelProc	Procedure called periodically to check for user cancel of the drawing operation. The default cancel proc can be obtained using **AVAppGetCancelProc**. May be **NULL**, in which case no cancel proc is used.
cancelProcClientData	Pointer to user-supplied data to pass to **cancelProc** each time it is called. Should be **NULL** if **cancelProc** is **NULL**.

Return Value

None

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

CosNewStream
PDPageDrawContentsToWindow
PDPageDrawContentsToWindowEx

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020001** or higher.

PDEnumDocs

```
void PDEnumDocs (PDDocEnumProc proc, void* clientData);
```

Description

Enumerates the **PDDoc**s that are currently open, calling a user-supplied procedure for each open document.

Parameters

proc	User-supplied callback to call for each open **PDDoc**. Enumeration halts if **proc** returns **false**.
clientData	Pointer to user-supplied data to pass to **proc** each time it is called.

Return Value

None

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

AVAppEnumDocs
PDDocOpen

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDGetHostEncoding

```
void* PDGetHostEncoding (void);
```

Description

Indicates what kind of host encoding a system uses. Allows you to determine whether a system is Roman or non-Roman. (Non-Roman is also known as CJK-capable, that is, capable of handling multi-byte character sets, such as Chinese, Japanese, or Korean.)

Host encoding is a platform-dependent encoding for the host machine. For non-UNIX Roman systems, it is MacRomanEncoding in Mac OS and WinAnsiEncoding in Windows. In UNIX (except HP-UX) Roman systems, it is ISO8859-1 (ISO Latin-1); for HP-UX, it is HP-ROMAN8. See Appendix D in the *PDF Reference* for descriptions of MacRomanEncoding and WinAnsiEncoding. For non-Roman systems, the host encoding may be a variety of encodings, which are defined by a CMap (character map). Use **PDGetHostEncoding** to determine if a system's host encoding is Roman or not.

Parameters

None

Return Value

0 for a Roman system; nonzero for a non-Roman system (a structure that depends on the host encoding). Users should simply test whether this value is **0** or not.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDGetPDFDocEncoding

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020003** or higher.

PDGetPDFDocEncoding

```
ASUns8** PDGetPDFDocEncoding (void);
```

Description

Gets an array describing the differences between the platform's host encoding and PDFDocEncoding.

Host encoding is a platform-dependent encoding for the host machine. For non-UNIX Roman systems, it is MacRomanEncoding in Mac OS and WinAnsiEncoding in Windows. In UNIX (except HP-UX) Roman systems, it is ISO8859-1 (ISO Latin-1); for HP-UX, it is HP-ROMAN8. See Appendix D in the *PDF Reference* for descriptions of MacRomanEncoding, WinAnsiEncoding, and PDFDocEncoding.

Parameters

None

Return Value

An array containing 256 elements. Each element corresponds to a code point in the PDFDocEncoding, and is either **NULL** or a pointer to a string.

If the element is **NULL**, the code point refers to the same glyph in both host encoding and PDFDocEncoding. If the element is non-**NULL**, it points to a string containing the glyph name for the code point.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDGetHostEncoding

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDHostMBLen

```
ASInt32 PDHostMBLen (const char* cp);
```

Description

Gets the number of additional bytes required for the multi-byte character pointed to by **cp**. If **cp** points to a single-byte character, 0 is returned. This method allows determining the length of multi-byte character strings to allocate space for them.

PDHostMBLen has similar functionality to the ANSI-C code:

```
mblen(cp, MB_LEN_MAX) - 1
```

or the Windows function:

```
IsDBCSLeadByte(cp)
```

Parameters

cp	The character to examine.

Return Value

The number of bytes in the multi-byte character.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

None

Example

```
char* strchrMB(char* cp, char* ch) {
     ASInt32 ch_len = PDHostMBLen(ch);

     while (*cp != '\0') {
           ASInt32 cp_len = PDHostMBLen(cp);

           if (ch_len == cp_len) {
                 ASInt32 i;

                 for (i = 0; i < ch_len; i++)
                       if (cp[i] != ch[i])
                             break;

                 if (i == ch_len)
                       return cp;
           }

           cp += (cp_len + 1);
     }

     return NULL;
}
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020003** or higher.

PDPrefGetColorCal

```
ASBool PDPrefGetColorCal (PDColorCalP colorCal);
```

Description

Gets the values to use for displaying calibrated color and gray scale. These values are the chromaticity and gammas of the phosphors in the monitor.

These values are used for rendering if calibrated color is enabled by the preferences file item **avpDoCalibratedColor** (see **AVAppGetPreference**).

Parameters

colorCal	*(Filled by the method)* Pointer to a structure that contains the color calibration information. For RGB devices, the red, green, and blue chromaticity and gammas are used; for gray scale, **whiteChrom** and **greenGamma** are used. You must allocate storage for the **colorCal** data structure and pass a pointer to the memory you allocated.

Return Value

Always returns **true**.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDPrefSetColorCal
AVAppGetPreference

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDPrefSetColorCal

```
ASBool PDPrefSetColorCal (PDColorCalP colorCal);
```

Description

Sets the values to use for displaying calibrated color and gray scale. These values are the chromaticities and gammas of the phosphors in the monitor.

These values do not necessarily correspond to the monitor being used; it is the responsibility of the plug-in that sets these values to provide the correct values.

These values are used for rendering if calibrated color is enabled by the preferences file item **avpDoCalibratedColor** (see **AVAppSetPreference**).

Parameters

colorCal	Pointer to a structure that contains the color calibration information. For RGB devices, the red, green, and blue chromaticities and gammas are used; for gray scale, **whiteChrom** and **greenGamma** are used.

Return Value

true if the values were successfully set and installed for the currently active display device, **false** otherwise.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDPrefGetColorCal
AVAppSetPreference

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDRegisterCryptHandler

```
void PDRegisterCryptHandler (PDCryptHandler handler,
const char* pdfName, const char* userName);
```

Description

Registers a new security handler with the Acrobat viewer.

Parameters

handler	Pointer to a structure that contains the security handler's callback functions. This structure *must not* be freed after calling **PDRegisterCryptHandler.**
pdfName	The name of the security handler as it will appear in the PDF file. This name is also used by **PDDocSetNewCryptHandler**. Storage for this name can be freed after **PDRegisterCryptHandler** has been called.
userName	The name of the security handler as it will be shown in menus. This name can be localized into different languages. Storage for this name can be freed after **PDRegisterCryptHandler** has been called.

Return Value

None

Exceptions

Raises **genErrBadParm** if the security handler's **size** field is incorrect.

Raises **pdModErrDuplicateCryptName** if either **pdfName** or **userName** are already in use by a registered security handler.

Raises **genErrNoMemory** is memory is exhausted.

May raise other exceptions.

Notifications

None

Header File

PDCalls.h

Related Methods

PDDocSetNewCryptHandler
PDRegisterCryptHandlerEx

Example

```
PDCryptHandler handler;

handler = (PDCryptHandler) ASmalloc(
     sizeof(PDCryptHandlerRec));
handler->size = sizeof(PDCryptHandlerRec);
handler->NewAuthData = 0;
handler->GetAuthData = 0;
handler->Authorize =
     ASCallbackCreateProto(
     PDCryptAuthorizeProc, &Authorize);
handler->NewSecurityData =
     ASCallbackCreateProto(
     PDCryptNewSecurityDataProc,
     &NewSecurityData);
handler->ValidateSecurityData =
     ASCallbackCreateProto(
     PDCryptValidateSecurityDataProc,
     &ValidateSecurityData);
handler->UpdateSecurityData =
  ASCallbackCreateProto(
     PDCryptUpdateSecurityDataProc,
     &UpdateSecurityData);
handler->NewCryptData =
     ASCallbackCreateProto(
     PDCryptNewCryptDataProc, &NewCryptData);
handler->FillEncryptDict =
     ASCallbackCreateProto(
     PDCryptFillEncryptDictProc,
     &FillEncryptDict);
handler->GetSecurityInfo =
     ASCallbackCreateProto(
     PDCryptGetSecurityInfoProc,
     &GetSecurityInfo);
DURING
     PDRegisterCryptHandler(handler,
            "Subscription", "Subscript");
HANDLER
     ...
END_HANDLER
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDRegisterCryptHandlerEx

```
void PDRegisterCryptHandlerEx (PDCryptHandler handler,
const char* pdfName, const char* userName, void* clientData);
```

Description

Registers a new security handler with the Acrobat viewer. Same as **PDRegisterCryptHandler** except that it accepts a client data parameter.

Parameters

handler	Pointer to a structure that contains the security handler's callback functions. This structure must *not* be freed after calling **PDRegisterCryptHandlerEx**.
pdfName	The name of the security handler as it will appear in the PDF file. This name is also used by **PDDocSetNewCryptHandler**. Storage for this name can be freed after **PDRegisterCryptHandlerEx** has been called.
userName	The name of the security handler as it will be shown in menus. This name can be localized to different languages. Storage for this name can be freed after **PDRegisterCryptHandlerEx** has been called.
clientData	Pointer to user-supplied data to store with the handler.

Return Value

None

Exceptions

Raises **genErrBadParm** if the security handler's **size** field is incorrect.

Raises **pdModErrDuplicateCryptName** if either **pdfName** or **userName** are already in use by a registered security handler.

Raises **genErrNoMemory** is memory is exhausted.

May raise other exceptions.

Notifications

None

Header File

PDCalls.h

Related Methods

PDDocSetNewCryptHandler

PDRegisterCryptHandler

Example

```
PDCryptHandler handler;

handler = (PDCryptHandler) ASmalloc(
     sizeof(PDCryptHandlerRec));
handler->size = sizeof(PDCryptHandlerRec);
handler->NewAuthData = 0;
handler->GetAuthData = 0;
handler->Authorize =
ASCallbackCreateProto(
     PDCryptAuthorizeProc, &Authorize);
handler->NewSecurityData =
ASCallbackCreateProto(
     PDCryptNewSecurityDataProc,
     &NewSecurityData);
handler->ValidateSecurityData =
     ASCallbackCreateProto(
     PDCryptValidateSecurityDataProc,
     &ValidateSecurityData);
handler->UpdateSecurityData =
  ASCallbackCreateProto(
     PDCryptUpdateSecurityDataProc,
     &UpdateSecurityData);
handler->NewCryptData =
     ASCallbackCreateProto(
     PDCryptNewCryptDataProc, &NewCryptData);
handler->FillEncryptDict =
ASCallbackCreateProto(
     PDCryptFillEncryptDictProc,
     &FillEncryptDict);
handler->GetSecurityInfo =
ASCallbackCreateProto(
     PDCryptGetSecurityInfoProc,
     &GetSecurityInfo);
DURING
     PDRegisterCryptHandler(handler,
           "Subscription", "Subscript");
HANDLER
     ...
END_HANDLER
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020002** or higher.

PDRegisterFileSpecHandler

```
void PDRegisterFileSpecHandler (ASFileSys contextFileSys,
PDFileSpecHandler fileSpecHandler, void* fileSpecHandlerObj);
```

Description

Registers a new file specification handler with the Acrobat viewer. In version 3.0 and later of the Acrobat viewer, use the **PDRegisterFileSpecHandlerByName** method instead.

Parameters

contextFileSys	The file system that specifies the context in which the file specification handler is used. This is the file system on which the PDF document resides. It is sometimes necessary to use different file specification handlers depending on the file system in which the document is open. For example, when a document is opened in a Web browser, the Acrobat viewer may use the browser's http stack when it needs to use http. When a document is opened outside of the browser, however, the Acrobat viewer must use a different http stack.
fileSpecHandler	Pointer to a structure that contains the handler's callbacks. This structure *must* not be freed after calling **PDRegisterFileSpecHandler.**
fileSpecHandlerObj	Pointer to user-supplied data to pass to the file specification handler's callbacks each time they are called.

Return Value

None

Exceptions

genErrNoMemory

Notifications

None

Header File

PDCalls.h

Related Methods

PDRegisterFileSpecHandlerByName

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDRegisterFileSpecHandlerByName

```
void PDRegisterFileSpecHandlerByName (ASAtom specSysName,
ASFileSys contextFileSys, PDFileSpecHandler fileSpecHandler,
void* fileSpecHandlerObj);
```

Description

Registers a new file specification handler with the Acrobat viewer. The viewer calls the appropriate file specification handler when it encounters a file specification in a PDF file. The appropriate file specification handler is the one whose:

- **specSysName** matches the value of the **/FS** key in the file specification,
- **contextFileSys** matches the file system on which the PDF file resides.

The file specification handler's file system, (passed as the **fileSys** field of **fileSpecHandler**), is used to obtain data from, or write data to, the file referred to by the file specification.

Parameters

specSysName	The name (as an **ASAtom**) of a file system with which this file specification works.
contextFileSys	The file system that specifies the context in which the file specification handler is used. This is the file system on which the PDF document resides. It is sometimes necessary to use different file specification handlers depending on the file system in which the document is open. For example, when a document is opened in a Web broswer, the Acrobat viewer may use the browser's http stack when it needs to use http. When a document is opened outside of the browser, however, the Acrobat viewer must use a different http stack.
fileSpecHandler	Pointer to a structure that contains the handler's callbacks. This structure *must* not be freed after calling **PDRegisterFileSpecHandlerByName.**
fileSpecHandlerObj	Pointer to user-supplied data to pass to the file specification handler's callbacks each time they are called.

Return Value

None

Exceptions

genErrNoMemory

Notifications

None

Header File

PDCalls.h

Related Methods

PDRegisterFileSpecHandler

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020002** or higher.

PDXlateToHost

```
void PDXlateToHost (char* in, char* out, ASInt32 numBytes);
```

Description

Translates a string from PDFDocEncoding to host encoding. This method is useful when setting or retrieving displayed text that *must* be in PDFDocEncoding (or Unicode), such as text that appears in a text annotation or bookmark.

A character that cannot be converted to the destination encoding is replaced with a space.

Host encoding is a platform-dependent encoding for the host machine. For non-UNIX Roman systems, it is MacRomanEncoding in Mac OS and WinAnsiEncoding in Windows. In UNIX (except HP-UX) Roman systems, it is ISO8859-1 (ISO Latin-1); for HP-UX, it is HP-ROMAN8. See Appendix D in the *PDF Reference* for descriptions of MacRomanEncoding, WinAnsiEncoding, and PDFDocEncoding.

For non-Roman systems, the host encoding may be a variety of encodings, which are defined by a CMap (character map). See Table 5.14 in the *PDF Reference* for a list of predefined CMaps. Use **PDGetHostEncoding** to determine if a system's host encoding is Roman or not. For non-Roman systems, use **PDXlateToHostEx**.

In general, **PDXlateToHostEx** can be called instead of **PDXlateToHost** since **PDXlateToHostEx** works for any host encoding.

Parameters

in	The string to translate (may point to the same memory as **out**, allowing strings to translate in place).
out	*(Filled by the method)* The translated string (may point to the same memory as **in**).
numBytes	Number of bytes in the string to translate.

Return Value

None

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDGetHostEncoding
PDXlateToHostEx
PDXlateToPDFDocEnc
PDXlateToPDFDocEncEx

Example

```
ASUns16 attr;
attr = PDWordGetAttr(myWord);
wlen = PDWordGetLength(myWord);
if(attr & WXE_HAS_NONALPHANUM)/* handle
     Mac quotes */
     PDXlateToPDFDocEnc(&msg[0], &msg[0],
            strlen(msg));
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDXlateToHostEx

```
ASInt32 PDXlateToHostEx (const char* inPdfStr,
ASInt32 inPdfStrSize, char* outHostStr,
ASInt32 outHostStrSize);
```

Description

Translates a string from Unicode or PDFDocEncoding to host encoding. This method is useful when setting or retrieving displayed text that might be in Unicode, such as text that appears in a text annotation or bookmark.

A character that cannot be converted to the destination encoding is replaced with a space.

Host encoding is a platform-dependent encoding for the host machine. For non-UNIX Roman systems, it is MacRomanEncoding in Mac OS and WinAnsiEncoding in Windows. In UNIX (except HP-UX) Roman systems, it is ISO8859-1 (ISO Latin-1); for HP-UX, it is HP-ROMAN8. See Appendix D in the *PDF Reference* for descriptions of MacRomanEncoding, WinAnsiEncoding, and PDFDocEncoding. For non-Roman systems, the host encoding may be a variety of encodings, which are defined by a CMap (character map). See Section 5.6.4 in the *PDF Reference* for information on CMaps.

For non-Roman systems, use **PDXlatetoHostEx**. Use **PDGetHostEncoding** to determine whether the host encoding for a system is Roman or not.

In general, **PDXlatetoHostEx** operates the same as **PDXlateToHost** but requires an extra argument, since the sizes of the input and translated strings may differ. This method can be called instead of **PDXlateToHost**—and *must* be called for multi-byte character set systems.

Parameters

inPdfStr	Pointer to the string to translate (may point to the same memory as **outHostStr**, allowing strings to translate in place).
inPdfStrSize	The length of **inPdfStr**, in bytes.
outHostStr	*(Filled by the method)* Pointer to the translated string (may point to the same memory as **inPdfStr**).
outHostStrSize	The length of the **outHostStr** buffer, in bytes.

Return Value

Number of bytes in the translated string **outHostStr**.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDFontXlateToHost
PDFontXlateToUCS
PDGetHostEncoding
PDXlateToHost
PDXlateToPDFDocEnc
PDXlateToPDFDocEncEx

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020003** or higher.

PDXlateToPDFDocEnc

```
void PDXlateToPDFDocEnc (char* in, char* out,
ASInt32 numBytes);
```

Description

Translates a string from host encoding to PDFDocEncoding. This method is useful when setting or retrieving displayed text that *must* be in PDFDocEncoding (or Unicode), such as text that appears in a text annotation or bookmark.

A character that cannot be converted to the destination encoding is replaced with a space. For example, **PDXlateToPDFDocEnc** converts **\n** to a space character (**\r** is present in PDFDocEncoding and is left unchanged).

Host encoding is a platform-dependent encoding for the host machine. For non-UNIX Roman systems, it is MacRomanEncoding in Mac OS and WinAnsiEncoding in Windows. In UNIX (except HP-UX) Roman systems, it is ISO8859-1 (ISO Latin-1); for HP-UX, it is HP-ROMAN8. See Appendix D in the *PDF Reference* for descriptions of MacRomanEncoding, WinAnsiEncoding, and PDFDocEncoding.

For non-Roman systems, the host encoding may be a variety of encodings, which are defined by a CMap (character map). See Section 5.14 in the *PDF Reference* for a list of predefined CMaps. Use **PDGetHostEncoding** to determine if a system's host encoding is Roman or not. For non-Roman systems, use **PDXlateToPDFDocEncEx**.

In general, **PDXlateToPDFDocEncEx** can be called instead of **PDXlateToPDFDocEnc** since **PDXlateToPDFDocEncEx** works for PDFDocEncoding or Unicode.

Parameters

in	The string to translate (may point to the same memory as **out**, allowing strings to translate in place).
out	*(Filled by the method)* The translated string (may point to the same memory as **in**).
numBytes	Number of bytes in the string to translate.

Return Value

None

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDGetHostEncoding
PDXlateToHost
PDXlateToHostEx
PDXlateToPDFDocEncEx

Example

```
ASUns16 attr;
attr = PDWordGetAttr(myWord);
wlen = PDWordGetLength(myWord);
if(attr & WXE_HAS_NONALPHANUM)/* handle
     Mac quotes */
     PDXlateToPDFDocEnc(&msg[0], &msg[0],
            strlen(msg));
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDXlateToPDFDocEncEx

```
ASInt32 PDXlateToPDFDocEncEx (ASBool bUseUnicode,
const char* inHostStr, ASInt32 inHostStrSize, char* outPDFStr,
ASInt32 outPDFStrSize);
```

Description

Translates a string from host encoding to PDFDocEncoding or Unicode. This method is useful when using text that must be in PDFDocEncoding or Unicode, such as text in a text annotation, bookmark, or article title.

A character that cannot be converted to the destination encoding is replaced with a space. For example, **PDXlateToPDFDocEncEx** converts **\n** to a space character (**\r** is present in PDFDocEncoding and is left unchanged).

Host encoding is a platform-dependent encoding for the host machine. For non-UNIX Roman systems, it is MacRomanEncoding in Mac OS and WinAnsiEncoding in Windows. In UNIX (except HP-UX) Roman systems, it is ISO8859-1 (ISO Latin-1); for HP-UX, it is HP-ROMAN8. See Appendix D in the *PDF Reference* for descriptions of MacRomanEncoding, WinAnsiEncoding, and PDFDocEncoding.

For non-Roman systems, the host encoding may be a variety of encodings, which are defined by a CMap (character map). See Table 5.4 in the *PDF Reference* for a list of predefined CMaps.

For non-Roman systems, use **PDXlateToPDFDocEnc**Ex. You can use **PDGetHostEncoding** to determine whether a system's host encoding is Roman or not.

In general, **PDXlateToPDFDocEncEx** can be called instead of **PDXlateToPDFDocEnc** since **PDXlateToPDFDocEncEx** works for PDFDocEncoding or Unicode.

Parameters

bUseUnicode	If **true**, translate the string to Unicode; otherwise use PDFDocEncoding.
inHostStr	Pointer to the string to translate (may point to the same memory as **outPDFStr**, allowing strings to translate in place).
inHostStrSize	Number of bytes in the string to translate.
outPDFStr	*(Filled by the method)* Pointer to the translated string (may point to the same memory as **inHostStr**).
outPDFStrSize	The length of the **outPDFStr** buffer, in bytes.

Return Value

Number of bytes in the translated string **outPDFStr**.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDFontXlateToHost
PDFontXlateToUCS
PDGetHostEncoding
PDXlateToHost
PDXlateToHostEx
PDXlateToPDFDocEnc

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020003** or higher.

PDAction

PDActionDestroy

```
void PDActionDestroy (PDAction action);
```

Description

Destroys an action object.

Parameters

action	The action to destroy.

Return Value

None

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDActionNew
PDActionNewFromDest
PDActionNewFromFileSpec
PDActionFromCosObj

Example

```
if(PDActionIsValid(oldAction)
     PDActionDestroy(oldAction);
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDActionEqual

```
ASBool PDActionEqual (PDAction action, PDAction action2);
```

Description

Compares two actions for equality. Two actions are equal if and only if their Cos objects are equal (see **CosObjEqual**).

Parameters

action, action2	The two actions that are compared.

Return Value

true if the actions are equal, **false** otherwise.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

CosObjEqual

Example

```
if(PDActionIsValid(oldAction) && PDActionIsValid(newAction) &&
     PDActionEqual(oldAction, newAction))
     PDActionDestroy(oldAction);
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDActionFromCosObj

```
PDAction PDActionFromCosObj (CosObj obj);
```

Description

Converts a dictionary Cos object to an action and verifies that the action is valid. This method does not copy the object, but is instead the logical equivalent of a type cast.

Parameters

action	Dictionary Cos object for the action.

Return Value

The **PDAction** corresponding to **obj**.

Exceptions

Raises **pdErrBadAction** if the action is invalid as determined by **PDActionIsValid**.

Notifications

None

Header File

PDCalls.h

Related Methods

PDActionGetCosObj
PDActionNew
PDActionNewFromDest
PDActionNewFromFileSpec

Example

```
CosObj theObj;
action = PDActionFromCosObj(cosObj);
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDActionGetCosObj

```
CosObj PDActionGetCosObj (PDAction action);
```

Description

Gets the Cos object corresponding to an action. This method does not copy the object, but is instead the logical equivalent of a type cast.

Parameters

action	The action whose Cos object is obtained.

Return Value

Dictionary Cos object for the action. The contents of the dictionary can be enumerated using **CosObjEnum**.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDActionFromCosObj

Example

```
CosObj theObj;
if(PDActionGetSubtype(act) ==
ASAtomFromString("Thread"))
     theObj = PDActionGetCosObj(act);
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDActionGetDest

```
PDViewDestination PDActionGetDest (PDAction action);
```

Description

Gets an action's destination view. This only works for actions that contain a view destination—that is, actions whose subtype is **GoTo**.

For named destinations, this method may return a Cos string object or a Cos name object. See Section 7.2.1 in the *PDF Reference* for more information on named destinations.

NOTE: Since this method may not return a **PDViewDestination**, use the **PDViewDestResolve** method on the returned value to obtain a **PDViewDestination**.

Parameters

action	The action whose destination is obtained.

Return Value

The action's destination, which may be either a **PDViewDestination**—or for named destinations—a Cos string object or a Cos name object. Use the **PDViewDestResolve** method on this returned value to obtain a **PDViewDestination**.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDActionGetFileSpec
PDViewDestResolve

Example

```
PDViewDestination pdViewDest;
PDViewDestination pdViewDestFinal;
PDDoc pdDoc;

pdViewDest = PDActionGetDest(action);
pdViewDestFinal = PDViewDestResolve(pdViewDest, pdDoc);
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDActionGetFileSpec

```
PDFileSpec PDActionGetFileSpec (PDAction action);
```

Description

Gets a file specification from an action.

Not all types of actions have file specifications; this method only works for actions that contain a file specification. See Section 7.5 in the *PDF Reference* for more information on the contents of various types of actions.

Parameters

action	The action whose file specification is obtained.

Return Value

The action's file specification.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDActionGetDest

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDActionGetSubtype

```
ASAtom PDActionGetSubtype (PDAction action);
```

Description

Gets an action's subtype.

Parameters

action	The action whose subtype is obtained.

Return Value

The **ASAtom** corresponding to the action's subtype. The **ASAtom** can be converted to a string using **ASAtomGetString**.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

None

Example

```
CosObj theObj;
if(PDActionGetSubtype(act) == ASAtomFromString("Thread"))
     theObj = PDActionGetCosObj(act);
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDActionIsValid

```
ASBool PDActionIsValid (PDAction action);
```

Description

Tests an action's validity. This is intended only to ensure that the action has not been deleted, not to ensure that all necessary information is present and valid.

Parameters

action	The action whose validity is determined.

Return Value

true if the action is valid, **false** otherwise.

Exceptions

None

Notifications

None

Exceptions

None

Header File

PDCalls.h

Related Methods

PDActionEqual

Example

```
if(PDActionIsValid(oldAction)
    PDActionDestroy(oldAction);
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDActionNew

```
PDAction PDActionNew (PDDoc doc, ASAtom type);
```

Description

Creates a new action object.

Parameters

doc	The document in which the action is created.
type	The **ASAtom** corresponding to the action's subtype. The **ASAtom** can be obtained from a string using **ASAtomFromString**.

Return Value

The newly-created **PDAction**.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDActionNewFromDest
PDActionNewFromFileSpec
PDActionFromCosObj
PDActionDestroy

Example

```
#define Thread_K ASAtomFromString("Thread")
PDAction myAct = PDActionNew(doc, Thread_K);
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDActionNewFromDest

```
PDAction PDActionNewFromDest (PDDoc doc,
PDViewDestination dest, PDDoc destDoc);
```

Description

Creates a new action that takes the user to the specified destination view. This method can only be used for destinations in the same document as the source document. Cross-document links must be built up from the Cos level, populating the Action dictionary for the **GotoR** action as described in Section 7.5.3 in the *PDF Reference*.

Parameters

doc	The document in which the action is created and used.
dest	The destination view.
destDoc	Destination document. **destDoc** must be the same as **doc**.

Return Value

The newly-created action.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDActionNew
PDActionNewFromFileSpec
PDActionFromCosObj
PDActionDestroy

Example

```
dstPage = PDDocAcquirePage(pdDoc, (offset +
     Pages[i].pg)-1);
dest = PDViewDestCreate(pdDoc, dstPage,
     fit, &initRect, zoom, Pages[i].pg-1);
if(PDViewDestIsValid(dest)){
     pdAction = PDActionNewFromDest(pdDoc,
           dest, pdDoc);
     PDBookmarkSetAction(newBm, pdAction);
}
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDActionNewFromFileSpec

```
PDAction PDActionNewFromFileSpec (PDDoc containingDoc,
ASAtom type, PDFileSpec fileSpec);
```

Description

Creates an action of the specified type from a file specification.

Parameters

containingDoc	The document in which the action is created and used.
type	The type of action to create.
fileSpec	The file specification that is made part of an action.

Return Value

The newly-created **PDAction**.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDActionNew
PDActionNewFromDest
PDActionFromCosObj
PDActionDestroy

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to 0x00020000 or higher.

PDAnnot

PDAnnotEqual

```
ASBool PDAnnotEqual (PDAnnot anAnnot, PDAnnot annot2);
```

Description

Tests whether or not two annotations are identical.

Parameters

anAnnot, annot2	The two annotations to compare.

Return Value

true if the annotations are equal, **false** otherwise. Two annotations are equal if and only if their Cos objects are equal (see **CosObjEqual**).

Exceptions

pdErrBadAnnotation

Notifications

None

Header File

PDCalls.h

Related Methods

CosObjEqual

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDAnnotFromCosObj

```
PDAnnot PDAnnotFromCosObj (CosObj obj);
```

Description

Converts a dictionary Cos object to an annotation. This method does not copy the object, but is instead the logical equivalent of a type cast.

Parameters

obj	Dictionary Cos object for the annotation.

Return Value

The **PDAnnot** corresponding to the Cos object.

Exceptions

Raises **pdErrBadAnnotation** if the annotation is invalid, as determined by **PDAnnotIsValid**.

Notifications

None

Header File

PDCalls.h

Related Methods

PDAnnotGetCosObj

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDAnnotGetColor

```
ASBool PDAnnotGetColor (PDAnnot anAnnot, PDColorValue color);
```

Description

Gets a note or link annotation's color. If the annotation does not specify an explicit color, a default color is returned. Text annotations return "default yellow;" all others (links, and so forth) return black. Only RGB color specifications are currently supported.

Parameters

anAnnot	The note or link annotation whose color is obtained.
color	*(Filled by the method)* The annotation's color, which is used as follows: • Closed text note—the icon background color • Open, un-selected text note—bounding rectangle color • Open, selected text note—color of annotation's title bar • Link annotation—link border color

Return Value

true if the annotation specifies an explicit color, **false** if a default color was used.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDAnnotSetColor
PDAnnotGetDate
PDAnnotGetFlags
PDAnnotGetRect
PDAnnotGetTitle

Example

```
for(i=0;i<PDPageGetNumAnnots(pdPage);i++){
     annot = PDPageGetAnnot(pdPage, i);
     if(PDAnnotIsValid(annot) &&
            PDAnnotGetSubtype(annot) ==
                  ASAtomFromString("Text"))
     {
            if(!PDAnnotGetColor(annot, oldColor))
                  PDAnnotSetColor(annot, newColor);
     }
}
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDAnnotGetCosObj

```
CosObj PDAnnotGetCosObj (PDAnnot annot);
```

Description

Gets the Cos object corresponding to an annotation. This method does not copy the object, but is instead the logical equivalent of a type cast.

Parameters

annot	The annotation whose Cos object is obtained.

Return Value

Dictionary Cos object for the annotation. The contents of the dictionary can be enumerated using **CosObjEnum**. Returns a **NULL** Cos object if the annotation is not valid, as determined by **PDAnnotIsValid**.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDAnnotFromCosObj

Example

```
for (i=0;i<PDPageGetNumAnnots(pdPage);i++)
{
     annot = PDPageGetAnnot(pdPage, i);
     if(PDAnnotIsValid(annot) &&
            PDAnnotGetSubtype(annot) ==
            ASAtomFromString("Link"))
     {
            CosObj myCos = PDAnnotGetCosObj(
                  annot);
            /* now process myCos */
            ...
     }
}
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDAnnotGetDate

```
ASBool PDAnnotGetDate (PDAnnot anAnnot, ASTimeRecP date);
```

Description

Gets an annotation's date.

Parameters

anAnnot	The annotation whose date is obtained.
date	*(Filled by the method)* The annotation's time and date.

Return Value

true if the annotation contains a date key and the value of that key can be successfully parsed as a date string, **false** otherwise.

Exceptions

Raises **pdErrBadAnnotation** if the annotation is not valid or if the value of the annotation's **M** (ModDate) key is not a string.

Raises if **genErrBadParm** **date** is **NULL**.

Notifications

None

Header File

PDCalls.h

Related Methods

PDAnnotSetDate
PDAnnotGetColor
PDAnnotGetFlags
PDAnnotGetRect
PDAnnotGetTitle

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDAnnotGetFlags

```
ASUns32 PDAnnotGetFlags (PDAnnot anAnnot);
```

Description

Gets an annotation's flags.

Parameters

anAnnot	The annotation whose flags are obtained.
flags	*(Filled by the method)* An OR of the **PDAnnot Flags** values.

Return Value

The flags, or **0** if the annotation does not have a **flags** key.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDAnnotSetFlags
PDAnnotGetColor
PDAnnotGetDate
PDAnnotGetRect
PDAnnotGetTitle

Example

```
if(!PDAnnotGetFlags(annot) &
     pdAnnotInvisible)
     PDAnnotSetFlags(annot,pdAnnotInvisible);
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDAnnotGetRect

```
void PDAnnotGetRect (PDAnnot anAnnot, ASFixedRect* boxP);
```

Description

Gets the size and location of an annotation on its page.

Parameters

anAnnot	The annotation whose location and size are set.
boxP	*(Filled by the method)* Pointer to a rectangle that specifies the annotation's bounding rectangle, specified in user space coordinates.

Return Value

None

Exceptions

pdErrBadAnnotation

Notifications

None

Header File

PDCalls.h

Related Methods

PDAnnotSetRect
PDAnnotGetColor
PDAnnotGetDate
PDAnnotGetFlags
PDAnnotGetTitle

Example

```
ASFixedRect frect;
for(i=0;i<PDPageGetNumAnnots(pdPage);i++){
     annot = PDPageGetAnnot(pdPage, i);
     if(PDAnnotIsValid(annot) &&
            PDAnnotGetSubtype(annot) ==
            ASAtomFromString("Text"))
     {
            PDAnnotGetRect(annot, &frect);
            /* Modify the annot's rect */
            ...
            /* Set the annot's rect */
            PDAnnotSetRect(annot, &frect);
     }
}
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDAnnotGetSubtype

```
ASAtom PDAnnotGetSubtype (PDAnnot anAnnot);
```

Description

Gets an annotation's subtype.

Parameters

anAnnot	The annotation whose subtype is obtained.

Return Value

The **ASAtom** for the annotation's subtype. This can be converted to a string using **ASAtomFromString**. The storage pointed to by the return value is owned by the Acrobat viewer and should be assumed to be valid only until the next call into *any* plug-in API method; it should be immediately copied by the plug-in if the plug-in wants to reference it later.

Returns **ASAtomNull** if the annotation does not have a **Subtype** key or its value is not a name object.

Exceptions

pdErrBadAnnotation

Notifications

None

Header File

PDCalls.h

Related Methods

None

Example

```
for (i=0;i<PDPageGetNumAnnots(pdPage);i++)
{
     annot = PDPageGetAnnot(pdPage, i);
     if(PDAnnotIsValid(annot) &&
           PDAnnotGetSubtype(annot) ==
           ASAtomFromString("Link"))
     {
           ...
     }
}
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDAnnotGetTitle

```
ASInt32 PDAnnotGetTitle (PDAnnot anAnnot, char* buffer,
ASInt32 bufSize);
```

Description

Gets an annotation's label text.

NOTE: For Roman viewers, this text is always stored in the PDFDocEncoding. For non-Roman character set viewers, this text is stored as PDFDocEncoding or Unicode, depending on the file's creator. Files created in a non-Roman environment contain Unicode versions of these strings; in a Roman environment, files contain PDFDocEncoding versions of these strings.

Parameters

anAnnot	The annotation whose label is obtained.
buffer	*(Filled by the method)* String into which the annotation's label string is copied. If string is non-**NULL**, up to **bufsSize** bytes are copied into **buffer**.
bufSize	Buffer size, in bytes. Up to **bufSize** bytes of the annotation label string are copied into the string and an ASCII null character is appended. The caller is expected to have allocated **bufSize** + 1 bytes to allow for the null. If **buffer** is **NULL**, copies nothing.

Return Value

If the string is non-**NULL**, the number of bytes copied, not counting the trailing null. If string is **NULL**, the number of bytes that would be copied if string were not **NULL**.

Exceptions

pdErrBadAnnotation

Notifications

None

Header File

PDCalls.h

Related Methods

PDAnnotSetTitle
PDAnnotGetColor
PDAnnotGetDate
PDAnnotGetRect
PDAnnotGetFlags

Example

```
for(i=0;i<PDPageGetNumAnnots(pdPage);i++){
     annot = PDPageGetAnnot(pdPage, i);
     if(PDAnnotIsValid(annot) &&
            PDAnnotGetSubtype(annot) ==
            ASAtomFromString("Text"))
     {
            if(!PDAnnotGetTitle(annot, buf,
                  sizeof(buf)))
            {
                  strcat(buf, "-RD");
                  PDAnnotSetTitle(annot, buf,
                        sizeof(buf));
            }
     }
}
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDAnnotIsValid

```
ASBool PDAnnotIsValid (PDAnnot anAnnot);
```

Description

Tests whether or not an annotation is valid. This is intended only to ensure that the annotation has not been deleted, not to ensure that all necessary information is present and valid.

Parameters

anAnnot	The annotation whose validity is tested.

Return Value

true if **annot** is a valid annotation object, **false** otherwise. An annotation is valid if it is a Cos dictionary object and has a **Rect** key.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDAnnotEqual

Example

```
for(i=0;i<PDPageGetNumAnnots(pdPage);i++)
{
     annot = PDPageGetAnnot(pdPage, i);
     if(PDAnnotIsValid(annot) &&
           PDAnnotGetSubtype(annot) ==
    ASAtomFromString("Link"))
     {
           ...
     }
}
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDAnnotNotifyDidChange

```
void PDAnnotNotifyDidChange (PDAnnot annot, ASAtom key,
ASInt32 err);
```

Description

Broadcasts a **PDAnnotDidChange** notification. Plug-ins must call this method after making any change to a custom annotation.

Parameters

anAnnot	The annotation that has changed.
key	The **ASAtom** corresponding to the name of the key in the annotation's Cos dictionary that is changing.
err	An error code to pass to any method registered to receive the **PDAnnotDidChange** notification. Pass zero if the annotation was changed successfully. Pass a nonzero value if an error occurred while changing the annotation.

Return Value

None

Exceptions

None

Notifications

PDAnnotDidChange

Header File

PDCalls.h

Related Methods

PDAnnotNotifyWillChange
AVAppRegisterNotification

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDAnnotNotifyWillChange

```
void PDAnnotNotifyWillChange (PDAnnot annot, ASAtom key);
```

Description

Broadcasts a **PDAnnotWillChange** notification. Plug-ins must call this method before making any change to a custom annotation.

Parameters

anAnnot	The annotation that has changed.
key	The **ASAtom** corresponding to the name of the key in the annotation's Cos dictionary that is changing.

Return Value

None

Exceptions

None

Notifications

PDAnnotWillChange

Header File

PDCalls.h

Related Methods

PDAnnotNotifyDidChange
AVAppRegisterNotification

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDAnnotSetColor

```
void PDAnnotSetColor (PDAnnot anAnnot,
const PDColorValue color);
```

Description

Sets a note or link annotation's color. Only RGB color specifications are currently supported.

Parameters

anAnnot	The note or link annotation whose color is set.
color	The annotation's color, which is used as follows: • Closed text note—the icon background color • Open, unselected text note—bounding rectangle color • Open, selected text note—color of annotation's title bar • Link annotation—link border color

Return Value

None

Exceptions

None

Notifications

PDAnnotWillChange
PDAnnotDidChange

Header File

PDCalls.h

Related Methods

PDAnnotGetColor
PDAnnotSetDate
PDAnnotSetFlags
PDAnnotSetRect
PDAnnotSetTitle

Example

```
for(i=0;i<PDPageGetNumAnnots(pdPage);i++)
{
     annot = PDPageGetAnnot(pdPage, i);
     if(PDAnnotIsValid(annot) &&
            PDAnnotGetSubtype(annot) ==
                  ASAtomFromString("Text"))
     {
            if(!PDAnnotGetColor(annot, oldColor))
                  PDAnnotSetColor(annot, newColor);
     }
}
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDAnnotSetDate

```
void PDAnnotSetDate (PDAnnot anAnnot, const ASTimeRecP date);
```

Description

Sets an annotation's date.

Parameters

anAnnot	The annotation whose date is set.
date	The annotation's time and date.

Return Value

None

Exceptions

None

Notifications

PDAnnotWillChange
PDAnnotDidChange

Header File

PDCalls.h

Related Methods

PDAnnotGetDate
PDAnnotSetColor
PDAnnotSetFlags
PDAnnotSetRect
PDAnnotSetTitle

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDAnnotSetFlags

```
void PDAnnotSetFlags (PDAnnot anAnnot, ASUns32 flags);
```

Description

Sets an annotation's flags.

Parameters

anAnnot	The annotation whose flags are set.
flags	An OR of the **PDAnnot Flags** values.

Return Value

None

Exceptions

None

Notifications

PDAnnotWillChange
PDAnnotDidChange

Header File

PDCalls.h

Related Methods

PDAnnotGetFlags
PDAnnotSetColor
PDAnnotSetDate
PDAnnotSetRect
PDAnnotSetTitle

Example

```
if(!PDAnnotGetFlags(annot) &
     pdAnnotInvisible)
     PDAnnotSetFlags(annot,pdAnnotInvisible);
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDAnnotSetRect

```
void PDAnnotSetRect (PDAnnot anAnnot,
const ASFixedRect* newBox);
```

Description

Sets the size and location of an annotation on its page.

Parameters

anAnnot	The annotation whose location and size are set.
newBox	Pointer to a rectangle that specifies the annotation's bounding rectangle, specified in user space coordinates.

Return Value

None

Exceptions

None

Notifications

PDAnnotWillChange
PDAnnotDidChange

Header File

PDCalls.h

Related Methods

PDAnnotGetRect
PDAnnotSetColor
PDAnnotSetDate
PDAnnotSetFlags
PDAnnotSetTitle

Example

```
ASFixedRect frect;
for(i=0;i<PDPageGetNumAnnots(pdPage);i++){
     annot = PDPageGetAnnot(pdPage, i);
     if(PDAnnotIsValid(annot) &&
            PDAnnotGetSubtype(annot) ==
            ASAtomFromString("Text"))
     {
            PDAnnotGetRect(annot, &frect);
            /* Modify the annot's rect */
            ...
            /* Set the annot's rect */
            PDAnnotSetRect(annot, &frect);
     }
}
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDAnnotSetTitle

```
void PDAnnotSetTitle (PDAnnot anAnnot, const char* str,
ASInt32 nBytes);
```

Description

Sets an annotation's label text.

NOTE: For Roman viewers, this text is always stored in the PDFDocEncoding. For non-Roman character set viewers, this text is stored as PDFDocEncoding or Unicode, depending on the file's creator. Files created in a non-Roman environment contain Unicode versions of these strings; in a Roman environment, files contain PDFDocEncoding versions of these strings.

Parameters

anAnnot	The annotation whose label is set.
str	String containing the label to set.
nBytes	Length of label. The first **len** bytes of **str** are used as the label.

Return Value

None

Exceptions

None

Notifications

PDAnnotWillChange
PDAnnotDidChange

Header File

PDCalls.h

Related Methods

PDAnnotGetTitle
PDAnnotSetColor
PDAnnotSetDate
PDAnnotSetFlags
PDAnnotSetRect

Example

```
for(i=0;i<PDPageGetNumAnnots(pdPage);i++){
     annot = PDPageGetAnnot(pdPage, i);
     if(PDAnnotIsValid(annot) &&
            PDAnnotGetSubtype(annot) ==
            ASAtomFromString("Text"))
     {
            if(!PDAnnotGetTitle(annot, buf,
                  sizeof(buf)))
            {
                  strcat(buf, "-RD");
                  PDAnnotSetTitle(annot, buf,
                        sizeof(buf));
            }
     }
}
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDAnnotHandler

PDGetAnnotHandlerByName

```
PDAnnotHandler PDGetAnnotHandlerByName (ASAtom name);
```

Description

Gets the annotation handler that handles the specified annotation type.

Parameters

name	Name of the requested annotation handler. The character string for the name can be converted to an **ASAtom** using **ASAtomFromString**.

Return Value

The annotation handler that services annotations of type name. Returns the default annotation handler if no handler services the specified annotation type.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDRegisterAnnotHandler
AVAppRegisterAnnotHandler

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDRegisterAnnotHandler

```
void PDRegisterAnnotHandler (PDAnnotHandler handler);
```

Description

Registers a handler for an annotation subtype, replacing any previous handler that had been registered for that subtype. The annotation handler is not registered if its **PDAnnotHandlerGetTypeProc** returns **NULL**.

To effectively use a **PDAnnotHandler**, the **AVAnnotHandler** associated with this annotation must have its **AVAnnotHandlerGetInfoProc** and **AVAnnotHandlerDeleteInfoProc** callbacks defined.

Parameters

handler	Pointer to a structure containing the annotation handler's callbacks. This structure must not be freed after this call, but must be retained.

Return Value

None

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDGetAnnotHandlerByName
AVAppGetAnnotHandlerByName

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDBead

PDBeadAcquirePage

```
PDPage PDBeadAcquirePage (PDBead bead, PDDoc doc);
```

Description

Acquires the page on which a bead is located.

Parameters

bead	The bead whose page is acquired.
doc	The document in which **bead** is located.

Return Value

The page on which the bead resides. The acquired page must be freed using **PDPageRelease** when it is no longer needed.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDPageRelease

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDBeadDestroy

```
void PDBeadDestroy (PDBead bead);
```

Description

Destroys a bead.

Parameters

bead	The bead to destroy.

Return Value

None

Exceptions

pdErrBadBead

Notifications

None

Header File

PDCalls.h

Related Methods

PDBeadNew
PDBeadFromCosObj

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDBeadEqual

```
ASBool PDBeadEqual (PDBead bead, PDBead bead2);
```

Description

Tests two beads for equality. This method is useful to detect the end of a thread since the last bead in a thread points to the first.

Parameters

bead, bead2	The beads to compare.

Return Value

true if the two beads are identical, **false** otherwise. Two beads are equal if and only if their Cos objects are equal (see **CosObjEqual**).

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

CosObjEqual

Example

```
fbead = bead =
     PDThreadGetFirstBead(thread);
do {
     conPage = PDBeadAcquirePage(bead,pdDoc);
     pageNum = PDPageGetNumber(conPage);

     /* process pageNum */
     ...

     PDPageRelease(conPage);
     bead = PDBeadGetNext(bead);
} while(PDBeadIsValid(bead) &&
     !PDBeadEqual(fbead, bead));
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDBeadFromCosObj

```
PDBead PDBeadFromCosObj (CosObj obj);
```

Description

Gets the **PDBead** corresponding to a Cos object, after checking the bead's validity. This method does not copy the object, but is instead the logical equivalent of a type cast.

Parameters

obj	Dictionary Cos object for the bead whose **PDBead** is obtained.

Return Value

The **PDBead** object for the bead.

Exceptions

Raises **pdErrBadBead** if the bead is not valid, as determined by **PDBeadIsValid**.

Notifications

None

Header File

PDCalls.h

Related Methods

PDBeadGetCosObj

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDBeadGetCosObj

```
CosObj PDBeadGetCosObj (PDBead bead);
```

Description

Gets the Cos object corresponding to a bead. This method does not copy the object, but is instead the logical equivalent of a type cast.

Parameters

bead	The bead whose Cos object is obtained.

Return Value

Dictionary Cos object for the bead. The contents of the dictionary can be enumerated using **CosObjEnum**. Returns a **NULL** Cos object if **PDBeadIsValid(bead)** returns **false.**

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDBeadFromCosObj

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDBeadGetIndex

```
ASInt32 PDBeadGetIndex (PDBead bead);
```

Description

Gets the index of a bead in its thread.

Parameters

bead	The bead whose index is obtained.

Return Value

The index of the bead in its thread. The first bead in a thread has an index of zero.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

None

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDBeadGetNext

```
PDBead PDBeadGetNext (PDBead bead);
```

Description

Gets the next bead in a thread.

Parameters

bead	The bead for which the next bead is obtained.

Return Value

The next bead, or a **NULL** Cos object (cast to a **PDBead** using **PDBeadFromCosObj**). On the last bead, **PDBeadGetNext** returns the first bead.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDBeadGetPrev
PDThreadGetFirstBead
PDBeadEqual

Example

```
fbead = bead =
     PDThreadGetFirstBead(thread);
do {
     conPage = PDBeadAcquirePage(bead,pdDoc);
     pageNum = PDPageGetNumber(conPage);

     /* process pageNum */
     ...

     PDPageRelease(conPage);
     bead = PDBeadGetNext(bead);
} while(PDBeadIsValid(bead) &&
     !PDBeadEqual(fbead, bead));
```

Availability

Available if **`PI_PDMODEL_VERSION`** (in `PIRequir.h`) is set to **`0x00020000`** or higher.

PDBeadGetPrev

PDBead PDBeadGetPrev (**PDBead** bead);

Description

Gets the previous bead in a thread.

Parameters

bead	The bead for which the previous bead is obtained.

Return Value

The previous bead, or a **NULL** Cos object (cast to a **PDBead** using **PDBeadFromCosObj**) if this is the first bead in the thread.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDBeadGetNext
PDThreadGetFirstBead
PDBeadEqual

Example

```
fbead = bead =
     PDThreadGetFirstBead(thread);
do {
     conPage = PDBeadAcquirePage(bead,pdDoc);
     pageNum = PDPageGetNumber(conPage);

     /* process pageNum */
     ...

     PDPageRelease(conPage);
     bead = PDBeadGetNext(bead);
} while(PDBeadIsValid(bead) &&
     !PDBeadEqual(fbead, bead));
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDBeadGetRect

```
void PDBeadGetRect (PDBead bead, ASFixedRectP rectP);
```

Description

Gets a bead's bounding rectangle.

Parameters

bead	The bead whose bounding rectangle is obtained.
rectP	*(Filled by the method)* Pointer to a **ASFixedRect** specifying the bead's bounding rectangle, specified in user space coordinates.

Return Value

None

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Method

PDBeadSetRect
PDBeadGetIndex
PDBeadGetNext
PDBeadGetPrev
PDBeadGetThread

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDBeadGetThread

```
PDThread PDBeadGetThread (PDBead bead);
```

Description

Gets the thread containing the specified bead.

Parameters

bead	The bead whose thread is obtained.

Return Value

The bead's thread, or a **NULL** Cos object if the bead does not belong to a thread.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDBeadGetRect
PDBeadGetIndex
PDBeadGetNext
PDBeadGetPrev

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDBeadInsert

```
void PDBeadInsert (PDBead bead, PDBead newNext);
```

Description

Inserts a bead after the specified bead.

Parameters

bead	The bead after which **newNext** will be inserted.
newNext	The bead to insert.

Return Value

None

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDBeadNew
PDThreadSetFirstBead

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to 0x00020000 or higher.

PDBeadIsValid

```
ASBool PDBeadIsValid (PDBead bead);
```

Description

Tests a bead's validity. This is intended only to ensure that the bead has not been deleted, not to ensure that all necessary information is present and valid.

Parameters

bead	The bead whose validity is tested.

Return Value

true if the bead is valid, **false** otherwise.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDBeadEqual

Example

```
fbead = bead =
     PDThreadGetFirstBead(thread);
do {
     conPage = PDBeadAcquirePage(bead,pdDoc);
     pageNum = PDPageGetNumber(conPage);

     /* process pageNum */
     ...

     PDPageRelease(conPage);
     bead = PDBeadGetNext(bead);
} while(PDBeadIsValid(bead) &&
     !PDBeadEqual(fbead, bead));
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDBeadNew

```
PDBead PDBeadNew (PDPage page, const ASFixedRectP destRect);
```

Description

Creates a new bead on the specified page. The newly-created bead is not linked to a thread or another bead. Use **PDThreadSetFirstBead** to make the bead the first bead in a thread. Use **PDBeadInsert** to link it to another bead.

Parameters

page	The page on which the bead is created.
destRect	Pointer to a **ASFixedRect** specifying the bead's bounding rectangle, specified in user space coordinates.

Return Value

The newly-created bead.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDThreadSetFirstBead
PDBeadInsert
PDBeadFromCosObj
PDBeadDestroy

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to 0x00020000 or higher.

PDBeadSetPage

```
void PDBeadSetPage (PDBead bead, PDPage newPage);
```

Description

Sets the page for a bead.

Parameters

bead	The bead whose page is set.
newPage	The page on which **bead** is located.

Return Value

None

Exceptions

pdErrBadBead

Notifications

None

Header File

PDCalls.h

Related Methods

PDBeadSetRect

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDBeadSetRect

```
void PDBeadSetRect (PDBead bead,
const ASFixedRectP newDestRect);
```

Description

Sets a bead's bounding rectangle.

Parameters

bead	The bead whose bounding rectangle is set.
newDestRect	Pointer to a **ASFixedRect** specifying the bead's bounding rectangle, specified in user space coordinates.

Return Value

None

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDBeadGetRect
PDBeadSetPage

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDBookmark

PDBookmarkAddChild

```
void PDBookmarkAddChild (PDBookmark parent,
PDBookmark aBookmark);
```

Description

Adds **aBookmark** as the last child of **parent,** adjusting the tree containing **parent** appropriately. If **parent** previously had no children, it is open after the child is added.

Parameters

parent	The parent of the bookmark being added.
aBookmark	Bookmark that will become the last child of **aBookmark.** **aBookmark** must have been previously unlinked.

Return Value

None

Exceptions

None

Notifications

PDBookmarkDidChangePosition

Header File

PDCalls.h

Related Methods

PDBookmarkAddNewSibling
PDBookmarkAddNewChild
PDBookmarkAddSubtree
PDBookmarkAddPrev
PDBookmarkAddNext
PDBookmarkUnlink

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDBookmarkAddNewChild

```
PDBookmark PDBookmarkAddNewChild (PDBookmark aBookmark,
char* initialText);
```

Description

Adds a new bookmark to the tree containing **aBookmark**, as the new last child of **aBookmark**. If **aBookmark** previously had no children, it will be open after the child is added.

Parameters

aBookmark	The bookmark to which a new last child is added.
initialText	The new bookmark's title.

Return Value

The newly-created bookmark.

Exceptions

None

Notifications

PDBookmarkDidChangePosition
PDBookmarkWasCreated

Header File

PDCalls.h

Related Methods

PDBookmarkAddNewSibling
PDBookmarkAddSubtree
PDBookmarkAddPrev
PDBookmarkAddNext
PDBookmarkAddChild
PDBookmarkUnlink

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDBookmarkAddNewSibling

```
PDBookmark PDBookmarkAddNewSibling (PDBookmark aBookmark,
char* initialText);
```

Description

Adds a new bookmark to the tree containing a **aBookmark,** as the new right sibling.

Parameters

aBookmark	The bookmark that will be the left sibling of the new bookmark.
initialText	The new bookmark's title.

Return Value

The newly-created bookmark.

Exceptions

None

Notifications

PDBookmarkDidChangePosition
PDBookmarkWasCreated

Header File

PDCalls.h

Related Methods

PDBookmarkAddChild
PDBookmarkAddNewChild
PDBookmarkAddNext
PDBookmarkAddPrev
PDBookmarkAddSubtree
PDBookmarkUnlink

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDBookmarkAddNext

```
void PDBookmarkAddNext (PDBookmark aBookmark,
PDBookmark newNext);
```

Description

Adds **newNext** as the new right sibling to **aBookmark**.

Parameters

aBookmark	The bookmark that will receive a new right sibling.
newNext	The bookmark to become the new right sibling of **aBookmark.** **newNext** must have been previously unlinked.

Return Value

None

Exceptions

None

Notifications

PDBookmarkDidChangePosition

Header File

PDCalls.h

Related Methods

PDBookmarkAddNewSibling
PDBookmarkAddChild
PDBookmarkAddSubtree
PDBookmarkAddPrev
PDBookmarkAddNewChild
PDBookmarkUnlink

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to 0x00020000 or higher.

PDBookmarkAddPrev

```
void PDBookmarkAddPrev (PDBookmark aBookmark,
PDBookmark newPrev);
```

Description

Adds **newPrev** as the new left sibling to **aBookmark,** adjusting the tree containing **aBookmark** appropriately.

Parameters

aBookmark	Bookmark that will receive a new left sibling **newPrev.**
newPrev	Bookmark to become the new left sibling of **aBookmark.** **newPrev** must have been previously unlinked.

Return Value

None

Exceptions

None

Notifications

PDBookmarkDidChangePosition

Header File

PDCalls.h

Related Methods

PDBookmarkAddNewSibling
PDBookmarkAddNewChild
PDBookmarkAddSubtree
PDBookmarkAddNext
PDBookmarkAddChild
PDBookmarkUnlink

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDBookmarkAddSubtree

```
void PDBookmarkAddSubtree (PDBookmark aBookmark,
PDBookmark source, char* sourceTitle);
```

Description

Adds a copy of the bookmark sub-tree source to **aBookmark,** as a new last child of **aBookmark**. This new item will have the text value **sourceTitle,** will be open, and will have no destination attribute. **source** must have been previously unlinked. If **aBookmark** previously had no children, it will be open after the subtree is added.

Parameters

aBookmark	The bookmark to which the subtree **source** will be added as a new last child.
source	The bookmark subtree to add.
sourceTitle	The new bookmark's title.

Return Value

None

Exceptions

None

Notifications

PDBookmarkWillChange
PDBookmarkDidChange
PDBookmarkDidChangePosition

Header File

PDCalls.h

Related Methods

PDBookmarkAddNewSibling
PDBookmarkAddNewChild
PDBookmarkAddPrev
PDBookmarkAddNext
PDBookmarkAddChild
PDBookmarkUnlink

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDBookmarkDestroy

```
void PDBookmarkDestroy (PDBookmark aBookmark);
```

Description

Removes a bookmark subtree from the bookmark tree containing it.

Parameters

aBookmark	The root bookmark of the subtree to remove.

Return Value

None

Exceptions

None

Notifications

PDBookmarkWillDestroy
PDBookmarkDidDestroy

Header File

PDCalls.h

Related Methods

PDBookmarkAddNewChild
PDBookmarkAddNewSibling
PDBookmarkFromCosObj
PDBookmarkUnlink

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDBookmarkEqual

```
ASBool PDBookmarkEqual (PDBookmark aBookmark,
PDBookmark bookmark2);
```

Description

Tests whether or not two bookmarks are equal. Two bookmarks are equal if and only if their Cos objects are equal (see **CosObjEqual**).

Parameters

aBookmark, bookmark2	The two bookmarks to compare.

Return Value

true if the bookmarks are equal, **false** otherwise.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

CosObjEqual

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDBookmarkFromCosObj

```
PDBookmark PDBookmarkFromCosObj (CosObj obj);
```

Description

Converts a Cos dictionary object to a bookmark and checks the validity of the bookmark. This method does not copy the object, but is instead the logical equivalent of a type cast.

Parameters

obj	Dictionary Cos object to convert to a bookmark.

Return Value

Bookmark corresponding to the Cos object.

Exceptions

Raises **pdErrBadBookmark** if the bookmark is not valid as determined by **PDBookmarkIsValid**.

Notifications

None

Header File

PDCalls.h

Related Methods

PDBookmarkGetCosObj

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDBookmarkGetAction

```
PDAction PDBookmarkGetAction (PDBookmark aBookmark);
```

Description

Gets a bookmark's action. After you obtain the action, you can execute it with **AVDocPerformAction**.

Parameters

aBookmark	The bookmark whose action is obtained.
action	*(Filled by the method)* The bookmark's action.

Return Value

The bookmark's action.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

AVDocPerformAction
PDBookmarkSetAction
PDLinkAnnotGetAction

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDBookmarkGetByTitle

```
PDBookmark PDBookmarkGetByTitle (PDBookmark aBookmark,
char* aName, ASInt32 nameLen, ASInt32 maxdepth);
```

Description

Gets the first bookmark whose title is **aName**.

NOTE: For Roman viewers, this text is always stored in the PDFDocEncoding. For non-Roman character set viewers, this text is stored as PDFDocEncoding or Unicode, depending on the file's creator. Files created in a non-Roman environment contain Unicode versions of these strings; in a Roman environment, files contain PDFDocEncoding versions of these strings.

Parameters

aBookmark	The root of the bookmark subtree to search.
aName	The text value to search for. Character codes in **aName** are interpreted using the PDFDocEncoding.
nameLen	The length of **aName**.
maxDepth	The number of subtree levels to search, not counting the root level. • 0 — Only look at **aBookmark**, not at any of its children. • 1 — Check **aBookmark** and its children, but not any grandchildren or great grandchildren, and so on. • –1 — Check the entire subtree.

Return Value

The bookmark with the specified title, or a **NULL** Cos object if there is no such bookmark.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

None

Availability

Available if **`PI_PDMODEL_VERSION`** (in `PIRequir.h`) is set to **`0x00020000`** or higher.

PDBookmarkGetColor

```
ASBool PDBookmarkGetColor (PDBookmark bm,
PDColorValue pdcvOut);
```

Description

Retrieves the color of the specified bookmark.

Parameters

bm	The bookmark in question.
pdcvOut	*(Filled by the method)* Color of the bookmark in **PDColorValue** format.

Return Value

true if color was specified, **false** otherwise (default color returned in **pdcvOut**).

Exceptions

If bookmark is invalid or existing color is malformed in the PDF file.

Notifications

None

Header File

PDCalls.h

Related Methods

PDBookmarkSetColor

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDBookmarkGetCosObj

```
CosObj PDBookmarkGetCosObj (PDBookmark aBookmark);
```

Description

Gets the Cos object for a bookmark. This method does not copy the object, but is instead the logical equivalent of a type cast.

Parameters

aBookmark	The bookmark whose Cos object is obtained.

Return Value

Dictionary Cos object for the bookmark. The contents of the dictionary can be enumerated using **CosObjEnum**.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDBookmarkFromCosObj
CosObjEnum

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDBookmarkGetCount

```
ASInt32 PDBookmarkGetCount (PDBookmark aBookmark);
```

Description

Gets the number of open bookmarks in a subtree.

Parameters

aBookmark	The root of a subtree to count.

Return Value

Number of open bookmarks in the subtree (not including **aBookmark**).

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDBookmarkGetIndent
PDBookmarkHasChildren

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDBookmarkGetFirstChild

```
PDBookmark PDBookmarkGetFirstChild (PDBookmark aBookmark);
```

Description

Gets a bookmark's first child.

Parameters

aBookmark	The bookmark whose first child is obtained.

Return Value

First child of **aBookmark**, or a **NULL** Cos object if **aBookmark** has no children.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDBookmarkGetParent
PDBookmarkGetLastChild
PDBookmarkHasChildren
PDBookmarkGetNext
PDBookmarkGetPrev

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDBookmarkGetFlags

```
ASInt32 PDBookmarkGetFlags (PDBookmark bm);
```

Description

Retrieves the flags of the specified bookmark.

Parameters

bm	The bookmark in question.

Return Value

Bookmark's flags. Bit 1 indicates bold font; bit 2 indicates italic font.

Exceptions

If bookmark is invalid or existing style is malformed in the PDF file.

Notifications

None

Header File

PDCalls.h

Related Methods

PDBookmarkSetFlags

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDBookmarkGetIndent

```
ASInt32 PDBookmarkGetIndent (PDBookmark aBookmark);
```

Description

Returns the indentation level of a bookmark in its containing tree.

Parameters

aBookmark	The bookmark whose indentation level is obtained.

Return Value

The indentation level of **aBookmark** in its containing tree. The root level has an indentation level of zero.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

None

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDBookmarkGetLastChild

```
PDBookmark PDBookmarkGetLastChild (PDBookmark aBookmark);
```

Description

Gets a bookmark's last child.

Parameters

aBookmark	The bookmark whose last child is obtained.

Return Value

Last child of **aBookmark**, or a **NULL** Cos object if **aBookmark** has no children.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDBookmarkGetParent
PDBookmarkGetFirstChild
PDBookmarkGetNext
PDBookmarkGetPrev

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDBookmarkGetNext

```
PDBookmark PDBookmarkGetNext (PDBookmark aBookmark);
```

Description

Gets bookmark's next (right) sibling.

Parameters

aBookmark	Bookmark whose right sibling is being obtained.

Return Value

aBookmark's next (right) sibling. Returns a **NULL** Cos object if **aBookmark** has no next sibling (that is, it is its parent's last child).

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDBookmarkGetParent
PDBookmarkGetFirstChild
PDBookmarkGetLastChild
PDBookmarkGetPrev

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDBookmarkGetParent

```
PDBookmark PDBookmarkGetParent (PDBookmark aBookmark);
```

Description

Gets a bookmark's parent bookmark.

Parameters

aBookmark	Bookmark whose parent is obtained.

Return Value

Parent bookmark of **aBookmark**, or a **NULL** Cos object if **aBookmark** is the root of its tree.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDBookmarkGetFirstChild
PDBookmarkGetLastChild
PDBookmarkGetNext
PDBookmarkGetPrev

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDBookmarkGetPrev

```
PDBookmark PDBookmarkGetPrev (PDBookmark aBookmark);
```

Description

Returns bookmark's previous (left) sibling.

Parameters

aBookmark	The bookmark whose left sibling is obtained.

Return Value

Previous (left) sibling of **aBookmark**, or a **NULL** Cos object if bookmark has no previous sibling (it is its parent's first child).

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDBookmarkGetParent
PDBookmarkGetFirstChild
PDBookmarkGetLastChild
PDBookmarkGetNext

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDBookmarkGetTitle

```
ASInt32 PDBookmarkGetTitle (PDBookmark aBookmark,
char* buffer, ASInt32 bufSize);
```

Description

Gets a bookmark's title.

NOTE: For Roman viewers, this title text is always stored in the PDFDocEncoding. For non-Roman character set viewers, this text is stored as PDFDocEncoding or Unicode, depending on the file's creator. Files created in a non-Roman environment contain Unicode versions of these strings; in a Roman environment, files contain PDFDocEncoding versions of these strings.

Parameters

aBookmark	Bookmark whose title is obtained.
buffer	*(Filled by the method)* Buffer into which the title will be written. If **buffer** is non-**NULL**, it is assumed to be of size **nBytes** + 1. The returned text remains valid only until next PDModel method call. The text is returned using PDFDocEncoding, and may be converted to a platform's native encoding using **PDXlateToHost** or **PDXlateToHostEx**.
bufSize	Number of bytes to copy, not counting trailing **NULL**.

Return Value

The number of characters copied into **buffer**.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDBookmarkSetTitle
PDXlateToHost
PDXlateToHostEx

Availability

Available if **`PI_PDMODEL_VERSION`** (in `PIRequir.h`) is set to **`0x00020000`** or higher.

PDBookmarkHasChildren

```
ASBool PDBookmarkHasChildren (PDBookmark aBookmark);
```

Description

Tests whether or not a bookmark has children.

Parameters

aBookmark	The bookmark to test.

Return Value

true if **aBookmark** has any children, **false** otherwise.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

None

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDBookmarkIsOpen

```
ASBool PDBookmarkIsOpen (PDBookmark aBookmark);
```

Description

Tests whether or not a bookmark is open. An open bookmark shows all its children.

Parameters

aBookmark	The bookmark to test.

Return Value

true if the bookmark is open, **false** otherwise.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDBookmarkSetOpen

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDBookmarkIsValid

```
ASBool PDBookmarkIsValid (PDBookmark aBookmark);
```

Description

Tests whether or not a bookmark is valid. This is intended only to ensure that the bookmark has not been deleted, not to ensure that all necessary information is present and valid.

Parameters

aBookmark	The bookmark whose validity is being tested.

Return Value

true if the bookmark is valid, **false** otherwise.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDBookmarkEqual

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDBookmarkRemoveAction

```
void PDBookmarkRemoveAction (PDBookmark aBookmark);
```

Description

Removes a bookmark's action.

Parameters

aBookmark	The bookmark whose action is being removed.

Return Value

None

Exceptions

pdErrBadAction

Notifications

PDBookmarkDidChange
PDBookmarkWillChange

Header File

PDCalls.h

Related Methods

None

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDBookmarkSetAction

```
void PDBookmarkSetAction (PDBookmark aBookmark,
PDAction action);
```

Description

Sets a bookmark's action.

Parameters

aBookmark	The bookmark whose action is set.
action	The bookmark's action.

Return Value

None

Exceptions

None

Notifications

PDBookmarkWillChange
PDBookmarkDidChange

Header File

PDCalls.h

Related Methods

PDBookmarkGetAction

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDBookmarkSetColor

```
void PDBookmarkSetColor (PDBookmark bm, PDColorValue pdcvIn);
```

Description

Sets the color of the specified bookmark.

Parameters

aBookmark	The bookmark in question.
pdcvIn	Color to set the bookmark to. Must be in DeviceRGB.

Return Value

None

Exceptions

If color is **NULL** or not in DeviceRGB, bookmark is invalid or existing bookmark color is malformed.

Notifications

PDBookmarkCan/WillChange with "C" as the key.
PDBookmarkWillChange
PDBookmarkDidChange

Header File

PDCalls.h

Related Methods

PDBookmarkGetColor

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDBookmarkSetFlags

```
void PDBookmarkSetFlags (PDBookmark bm, ASInt32 nFlags);
```

Description

Sets the flags of the specified bookmark.

Parameters

bm	The bookmark in question.
nFlags	Bookmark's flags. Bit 1 indicates bold font; bit 2 indicates italic font.

Return Value

None

Exceptions

If bookmark is invalid or existing flags are malformed in the PDF file.

Notifications

PDBookmarkCan/WillChange with "F" as the key.

PDBookmarkWillChange
PDBookmarkDidChange

Header File

PDCalls.h

Related Methods

PDBookmarkGetFlags

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDBookmarkSetOpen

```
void PDBookmarkSetOpen (PDBookmark aBookmark, ASBool isOpen);
```

Description

Opens or closes a bookmark. An open bookmark shows its children, while a closed bookmark does not.

Parameters

aBookmark	The bookmark to open or close.
isOpen	**true** if the bookmark is opened, **false** if the bookmark is closed.

Return Value

None

Exceptions

None

Notifications

PDBookmarkWillChange
PDBookmarkDidChange

Header File

PDCalls.h

Related Methods

PDBookmarkIsOpen

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDBookmarkSetTitle

```
void PDBookmarkSetTitle (PDBookmark aBookmark,
const char* str, ASInt32 nBytes);
```

Description

Sets a bookmark's title.

NOTE: For Roman viewers, this title text is always stored in the PDFDocEncoding. For non-Roman character set viewers, this text is stored as PDFDocEncoding or Unicode, depending on the file's creator. Files created in a non-Roman environment contain Unicode versions of these strings; in a Roman environment, files contain PDFDocEncoding versions of these strings.

Parameters

aBookmark	Bookmark whose title is set.
str	Read-only string containing the bookmark's new title. The text must be encoded using PDFDocEncoding. Strings encoded using a platform's native encoding can be converted to PDFDocEncoding using **PDXlateToPDFDocEnc** or **PDXlateToPDFDocEncEx**.
nBytes	Number of bytes of **str** to copy.

Return Value

None

Exceptions

Raises **pdErrBookmarksError** if there is an error setting the title.

Notifications

PDBookmarkWillChange
PDBookmarkDidChange

Header File

PDCalls.h

Related Methods

PDBookmarkGetTitle

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDBookmarkUnlink

```
void PDBookmarkUnlink (PDBookmark aBookmark);
```

Description

Unlinks a bookmark from the bookmark tree that contains it, and adjusts the tree appropriately.

Parameters

aBookmark	The bookmark to unlink.

Return Value

None

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDBookmarkDestroy

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to 0x00020000 or higher.

PDCharProc

PDCharProcEnum

```
void PDCharProcEnum (PDCharProc charProc,
PDGraphicEnumMonitor mon, void* clientData);
```

Description

Enumerates the graphic description of a single character procedure for a Type 3 font. To enumerate all the character procedures in a Type 3 font (but not their graphic descriptions), use **PDFontEnumCharProcs.**

Parameters

charProc	The character procedure whose graphic description is enumerated.
mon	Pointer to a structure containing user-supplied callbacks that are called for each drawing operator on a page. Enumeration halts if any procedure returns **false**.
clientData	Pointer to user-supplied data to pass to each monitor routine that is called.

Return Value

None

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDFontEnumCharProcs
PDDocEnumFonts
PDDocEnumLoadedFonts

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDCharProcGetCosObj

```
CosObj PDCharProcGetCosObj (PDCharProc obj);
```

Description

Get the stream Cos object associated with the **PDCharProc**. This method does not copy the object, but is instead the logical equivalent of a type cast.

Parameters

obj	The character procedure whose Cos object is obtained.

Return Value

The character procedure's stream Cos object.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDFontEnumCharProcs
PDCharProcEnum

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to 0x00020000 or higher.

PDDoc

PDDocAcquire

```
void PDDocAcquire (PDDoc doc);
```

Description

Increments a document's reference count. The document will not be closed until the reference count is zero, or the application terminates.

Parameters

doc	The document whose reference count is incremented.

Return Value

None

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDDocRelease

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDDocAcquirePage

```
PDPage PDDocAcquirePage (PDDoc doc, ASInt32 pageNum);
```

Description

Gets a **PDPage** from a document. Increments the page's reference count. After you are done using the page, release it using **PDPageRelease**.

Parameters

doc	The document containing the page to acquire.
pageNum	The page number of the page to acquire. The first page is 0.

Return Value

The acquired page.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDPageRelease

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDDocAddThread

```
void PDDocAddThread (PDDoc doc, ASInt32 addAfterIndex,
PDThread thread);
```

Description

Adds an article thread to a document after the specified thread index.

Parameters

doc	The document in which the thread is added. Must match the document used in the call to **PDThreadNew** that created the thread.
addAfterIndex	The index of the thread after which **thread** is added.
thread	The thread to add.

Return Value

None

Exceptions

None

Notifications

PDDocDidAddThread

Header File

PDCalls.h

Related Methods

PDThreadNew
PDThreadFromCosObj
PDDocRemoveThread

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDDocAuthorize

```
PDPerms PDDocAuthorize (PDDoc pdDoc, PDPerms permsWanted,
void* authData);
```

Description

Adds permissions to the specified document, if permitted. Calls the **PDCryptAuthorizeProc** callback of the document's security handler to determine which of the specified permissions will actually be granted. After calling this method, the document's permissions will be the OR of the previous permissions and the permissions granted by the **PDCryptAuthorizeProc** callback.

Parameters

pdDoc	The document for which new permissions are requested.
permsWanted	The new permissions being requested. Must be an OR of the **PDPerms** values.
authData	Pointer to data to pass to the **PDCryptAuthorizeProc** callback of the document's security handler. For the Acrobat viewer's built-in security handler, **authData** is a c**har*** containing the password.

Return Value

The OR of the previous value of the document's permissions field, and the permissions granted by the **PDCryptAuthorizeProc** callback of the document's security handler. The result will be an OR of the **PDPerms** values.

Exceptions

Raises **pdErrNeedCryptHandler** if no security handler is associated with **pdDoc**.

Raises whatever exceptions are raised by the security handler's **PDCryptAuthorizeProc** callback.

Notifications

None

Header File

PDcalls.h

Related Methods

PDDocGetNewCryptHandler
PDRegisterCryptHandler

Availability

Available if **`PI_PDMODEL_VERSION`** (in `PIRequir.h`) is set to **`0x00020000`** or higher.

PDDocCalculateImplicitMetadata

```
void PDDocCalculateImplicitMetadata (PDDoc pdDoc);
```

Description

Notifies all registered implicit metadata calculators to run.

Issues the notification **PDDocCalculateMetadata**, passing **pdDoc** to all registered handlers.

Parameters

pdDoc	The document for which implicit metadata should be calculated.

Return Value

None

Exceptions

None

Notifications

PDDocCalculateMetadata

Header File

PDMetadataCalls.h

Related Methods

PDDocSave

Availability

Available if **PI_PDMETADATA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDDocClearFlags

```
void PDDocClearFlags (PDDoc doc, ASInt32 flags);
```

Description

Clears flags associated with a document. This method is most frequently used to mark a modified document as clean (by clearing the **PDDocNeedsSave** flag) to avoid bringing up the Save dialog when the file is closed.

Parameters

doc	The document whose flags are cleared.
flags	The flags to clear. Must be an OR of the **PDDocFlags** values.

Return Value

None

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDDocSave
PDDocClose
PDDocGetFlags
PDDocSetFlags

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020001** or higher.

PDDocClose

```
void PDDocClose (PDDoc doc);
```

Description

Closes a document and releases its resources. If **doc** is **NULL**, does nothing. Changes are not saved. You must use **PDDocSave** to save any modifications before calling **PDDocClose**.

If the document has been modified but you wish to mark it as clean, use **PDDocClearFlags**.

Parameters

doc	The document to close.

Return Value

None

Exceptions

Raises **pdErrUnableToCloseDueToRefs** if there are any outstanding references to objects in the document, and the document will still be valid (its resources will not be released).

Raises **genErrBadUnlock** if the document's open count is less than one.

Notifications

None

Header File

PDCalls.h

Related Methods

PDDocSave
PDDocOpen
PDDocCreate
PDDocClearFlags
PDDocSetFlags

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDDocCopyToFile

```
void PDDocCopyToFile (PDDoc doc, PDDocCopyParams params);
```

Description

In the Reader or for documents that are not dirty, this method copies the bytes from the document's **ASFile** to the specified location. This also occurs if the **saveChanges** field in **params** is **false**. If **saveChanges** is **true**, the document is dirty, and the product is Acrobat, a full save is performed to the specified file. The resulting file is linearized. If the file already exists, it is overwritten.

Parameters

doc	The document to copy.
params	A structure that defines how the PDF file is copied.

Return Value

None

Exceptions

Raises **genErrBadParm** if an invalid argument is passed in **params**.

Raises **pdErrAlreadyOpen** if the target and source files are the same.

Raises **fileErrDiskFull** if there is no space for the copy.

Raises **pdErrCancelSave** if the save was canceled (**cancelProc** in **params** returned **true**).

Raises **pdErrUnableToRead** if a read error occurred on the source.

Raises **pdErrUnableToWrite** if a write error occurred on the destination.

Notifications

None

Header File

PDCalls.h

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00040005** or higher.

PDDocCreate

```
PDDoc PDDocCreate (void);
```

Description

Creates a new document. The only Cos object in the document will be a Catalog. See Section 3.6 in the *PDF Reference*. After the document is created, at least one page must be added using **PDDocCreatePage** or **PDDocInsertPages** before the Acrobat viewer can display or save the document.

When you are done with the document, you must call **PDDocClose** to release the resources used by the **PDDoc**; do *not* call **PDDocRelease**.

Parameters

None

Return Value

The newly-created document.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDDocClose
PDDocOpen
PDDocSave
PDDocCreatePage
PDDocInsertPages

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDDocCreateNameTree

```
PDNameTree PDDocCreateNameTree (PDDoc thePDDoc,
ASAtom theTree);
```

Description

Retrieves the name tree inside the Names dictionary with the specified key name, or creates it if it does not exist.

Parameters

thePDDoc	The document in which the name tree is created.
theTree	The name of the name tree to create. A string can be converted to an **ASAtom** using **ASAtomFromString**.

Return Value

The newly-created **PDNameTree** for the **PDDoc**. Returns a **NULL PDNameTree** if **pdDoc** has no root dictionary. The return value should be tested with **PDNameTreeIsValid**.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDNameTreeIsValid
PDDocGetNameTree
PDDocRemoveNameTree

Example

```
PDNameTree pdNameTree;
PDDoc thePDDoc;

pdNameTree = PDDocCreateNameTree (thePDDoc, ASAtomFromString
("docNameTree"));
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDDocCreatePage

```
PDPage PDDocCreatePage (PDDoc doc, ASInt32 afterPageNum,
ASFixedRect mediaBox);
```

Description

Creates and acquires a new page. The page is inserted into the document at the specified location. Call **PDPageRelease** when you are done using the page.

Parameters

doc	The document in which to create a page.
afterPageNum	The page number after which the new page is inserted. The first page is 0. Use **PDBeforeFirstPage** (see PDExpT.h) to insert the new page at the beginning of a document.
mediaBox	Rectangle specifying the page's media box, specified in user space coordinates.

Return Value

The newly-created page.

Exceptions

None

Notifications

PDDocWillInsertPages
PDDocDidInsertPages
PDDocDidChangePages
PDDocDidChangeThumbs

Header File

PDCalls.h

Related Methods

PDPageRelease
PDDocDeletePages
PDDocInsertPages
PDDocReplacePages

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDDocCreateStructTreeRoot

```
void PDDocCreateStructTreeRoot (PDDoc pdDoc,
PDSTreeRoot* treeRoot);
```

Description

Creates a new **StructTreeRoot** element.

If **PDDocCreateStructTreeRoot** is called on a **PDDoc** that already has a structure tree root, it returns without modifying the document.

Parameters

pdDoc	The **PDDoc** for which **StructTreeRoot** element is created.
treeRoot	*(Filled by the method)* The newly-created **StructTreeRoot** element.

Return Value

None

Exceptions

Raises an exception if **pdDoc** already has a **StructTreeRoot**.

Notifications

None

Header File

PDSWriteCalls.h

Related Methods

PDDocGetStructTreeRoot
PDSTreeRootGetRoleMap
PDSTreeRootGetClassMap
PDDocRemoveStructTreeRoot
PDSTreeRootCreateRoleMap
PDSTreeRootRemoveRoleMap
PDSTreeRootCreateClassMap
PDSTreeRootRemoveClassMap

Availability

Available if **PI_PDS_WRITE_VERSION (**in PIRequir.h) is set to **0x00040000** or higher.

PDDocCreateTextSelect

```
PDTextSelect PDDocCreateTextSelect (PDDoc doc,
ASInt32 pageNum, ASFixedRect* boundingRect);
```

Description

Creates a text selection that includes all words totally or partially enclosed by a rectangle. The text selection can then be set as the current selection using **AVDocSetSelection**.

NOTE: When this method is used to create a text selection on a rotated page, you must pass in a rotated **boundingRect**.

Parameters

doc	The document in which a text selection is created.
pageNum	The page number on which the text selection is created.
boundingRect	Pointer to a rectangle specifying the text selection's bounding rectangle, specified in user space coordinates.

Return Value

The newly-created text selection.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDTextSelectDestroy
AVDocSetSelection
PDTextSelectEnumQuads
PDTextSelectEnumText

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to 0x00020000 or higher.

PDDocCreateThumbs

```
void PDDocCreateThumbs (PDDoc doc, ASInt32 firstPage,
ASInt32 lastPage, PDThumbCreationServer server,
void* serverClientData, ASAtom colorSpace,
ASInt32 bitsPerComponent, ASInt32 hiVal, char* lookupTable,
ProgressMonitor  progMon, void* progMonClientData,
CancelProc cancelProc, void* cancelProcClientData);
```

Description

Creates thumbnail images for the specified range of pages. Thumbnail images are only created for pages that have none.

Use as large of a page range as possible because the color space object is shared by all the thumbnails created by a single invocation of this method (that is, if you call this method separately for each page, there will be duplicate color space objects).

See Section 4.5 in the *PDF Reference* for more details on color spaces.

See the Windows chapter of Technical Note #5167, *Acrobat Development Overview*, for additional important information about creating thumbnails on the Windows platform.

Parameters

doc	The document for which thumbnail images are created.
firstPage	The page number of the first page for which thumbnails are created. The first page is 0.
lastPage	The page number of the last page for which thumbnails are created. The constant **PDLastPage** (see PDExpT.h) can also be used.
server	A server (set of callback procedures) that provides the sampled image used as the thumbnail image. Pass **NULL** to use the default server.
serverClientData	User-supplied data to pass to the thumbnail creation server.

colorSpace	The color space in which the thumbnail data is represented. It must be **DeviceRGB**. Thumbnails may be created in either a direct or an indexed color space; however, it is strongly recommended that you use indexed color spaces over direct color spaces. Using direct color spaces with this version of Acrobat may cause bad looking thumbnails. To specify a direct color space, pass 0 for **hiVal** and **NULL** for **lookupTable**. To specify an indexed color space, pass the appropriate values in **hiVal** and **lookupTable**. Direct color spaces in Windows are supported in Acrobat 3.0. Prior to Acrobat 3.0 in Windows, you had to use indexed color spaces.
bitsPerComponent	The number of bits per color component in the thumbnail image's data. 8 is the only valid value.
hiVal	Used only for indexed color space; pass 0 for direct color spaces, as described in **colorSpace**. **hiVal** specifies the highest valid index in **lookupTable**. Because indices start at 0, the number of entries in lookupTable is **hiVal** + 1. **hiVal** must be 0 for device color spaces.
lookupTable	Used only for indexed color space; pass **NULL** for direct color spaces, as described in **colorSpace**. **lookupTable** is a table that maps data values to colors. Used only for indexed color spaces. Must be **NULL** for device color spaces. For an indexed color space, the size of the lookup table must be (**hiVal** + 1) × **sizeof(ASUns8)** × *3,* where the 3 arises because an RGB color space has three color components.
progMon	A monitor to call to display thumbnail creation progress. Use **AVAppGetDocProgressMonitor** to obtain the standard progress monitor to pass for this parameter. **NULL** may be passed, in which case no progress monitor is used.
progMonClientData	User-supplied data to pass to **progMon** each time it is called. Should be **NULL** if **progMon** is **NULL**.
cancelProc	A procedure to call frequently to allow the user to cancel thumbnail creation. Use **AVAppGetCancelProc** to obtain the default cancel proc for this parameter. May be **NULL**, in which case no cancel proc is used.
cancelProcClientData	User-supplied data to pass to **cancelProc** each time it is called. Should be **NULL** if **cancelProc** is **NULL**.

Return Value

None

Exceptions

None

Notifications

PDDocDidChangeThumbs

Header File

PDCalls.h

Related Methods

PDDocDeleteThumbs

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDDocCreateWordFinder

```
PDWordFinder PDDocCreateWordFinder (PDDoc doc,
ASUns16* outEncInfo, char** outEncVec, char** ligatureTbl,
ASInt16 algVersion, ASUns16 rdFlags, void* clientData);
```

Description

Creates a word finder that is used to extract text in the host encoding from a PDF file. The word finder may either be used by **PDWordFinderEnumWords** (which enumerates words one-by-one) or by **PDWordFinderAcquireWordList** (which fills a table with all the words on a page).

NOTE: The word finder also extracts text from Form XObjects that are executed in the page contents. For information about Form XObjects, see Section 4.9 in the *PDF Reference*.

A default ligature table is used, containing the following ligatures: fi, ff, fl, ffi, ffl, ch, cl, ct, ll, ss, fs, st, oe, ae, OE, AE. The glyph name is substituted for the ligature.

This method also works for non-Roman (CJK or Chinese-Japanese-Korean) viewers. In this case, words are extracted to the host encoding. Users desiring Unicode output must use **PDDocCreateWordFinderUCS**, which does the extraction for Roman or non-Roman text.

The type of **PDWordFinder** determines the encoding of the string returned by **PDWordGetString**. For instance, if **PDDocCreateWordFinderUCS** is used to create the word finder, **PDWordGetString** returns only Unicode.

For CJK viewers, words are stored internally using CID encoding. For more information on CIDFonts and related topics, see Section 5.6 in the *PDF Reference*. For detailed information on CIDFonts, see Technical Note #5092, *CID-Keyed Font Technology Overview*, and Technical Note #5014, *Adobe CMap and CIDFont Files Specification*.

Parameters

doc	The document on which the word finder is used.
outEncInfo	Array of 256 flags, specifying the type of character at each position in the encoding. Each flag is an OR of the **Character Type Codes**. If **outEncInfo** is **NULL**, the platform's default encoding info is used. Use **outEncInfo** and **outEncVec** together; for every **outEncInfo** use a corresponding **outEncVec** to specify the character at that position in the encoding. Regardless of the characters specified in **outEncInfo** as word separators, a default set of word separators is used (see **Glyph Names of Word Separators**). There is no way to change the list of characters that are considered to be word separators.

outEncVec	Array of 256 null-terminated strings that are the glyph names in encoding order. See the discussion of character names in Section 5.3 of the *PostScript Language Reference Manual, Third Edition.* If **outEncVec** is **NULL**, the platform's default encoding vector is used. For non-UNIX Roman systems, it is MacRomanEncoding in Mac OS and WinAnsiEncoding in Windows. In UNIX (except HP-UX) Roman systems, it is ISO8859-1 (ISO Latin-1); for HP-UX, it is HP-ROMAN8. See Appendix D in the *PDF Reference* for descriptions of MacRomanEncoding, WinAnsiEncoding, and PDFDocEncoding. Use this parameter with **outEncInfo**. See **outEncInfo** for more information.
ligatureTbl	A null-terminated array of null-terminated strings. Each string is the glyph name of a ligature in the font. When a word contains a ligature, the glyph name of the ligature is substituted for the ligature (for example, **ff** is substituted for the **ff** ligature). This table must be terminated with **NULL**. If **ligatureTbl** is **NULL**, a default ligature table is used, containing the following ligatures: **fi**, **ff**, **fl**, **ffi**, **ffl**, **ch**, **cl**, **ct**, **ll**, **ss**, **fs**, **st**, **oe**, **ae**, **OE**, **AE**.
algVersion	The version of the word-finding algorithm to use (see PDExpT.h), as follows (pass **0** if your plug-in doesn't care): **WF_LATEST_VERSION** —To obtain latest available version. **WF_VERSION_2**—Version used for Acrobat 3.x, 4.x. **WF_VERSION_3**—Available in Acrobat 5.0 without Accessibility enabled. Includes some improved word piecing algorithms. **WF_VERSION_4**—For Acrobat 5.0 with Accessibility enabled. Includes advanced word ordering algorithms in addition to improved word piecing algorithms.
rdFlags	Word-finding options that determine the tables filled when using **PDWordFinderAcquireWordList**. Must be an OR of one or more of the **Word Finder Sort Order Flags**. In Acrobat 5.0 this parameter is ignored and you should pass in **NULL**.
clientData	Pointer to user-supplied data to pass to the newly-created word finder.

Return Value

The newly-created word finder.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDDocCreateWordFinderUCS
PDWordFinderEnumWords
PDWordFinderAcquireWordList
PDWordFinderDestroy
PDWordFilterWord

Example

```
ACCB1 ASBool ACCB2 WordCounterProc (
            PDWordFinder WordFinder, PDWord word,
            ASInt32 PageNum, void* fileNum)
{
     ASUns32 cur;

     cur = (ASUns32) PDWordGetCharOffset(word);
     WordCnt += (cur - gLast);
     gLast = cur;
     return true;
}

WordFinder = PDDocCreateWordFinder(
     CurrentPDDoc, NULL, NULL, NULL, 0,
     WXE_PDF_ORDER, NULL);
PDWordFinderEnumWords(WordFinder, PageNum,
     ASCallbackCreateProto(PDWordProc,
     &WordCounterProc),NULL);
PDWordFinderDestroy(WordFinder);
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDDocCreateWordFinderUCS

```
PDWordFinder PDDocCreateWordFinderUCS (PDDoc doc,
ASInt16 algVersion, ASUns16 rdFlags, void* clientData);
```

Description

Creates a word finder that is used to extract text in Unicode format from a PDF file. The word finder may either be used by **PDWordFinderEnumWords** (which enumerates words one-by-one) or by **PDWordFinderAcquireWordList** (which fills a table with all the words on a page).

NOTE: The word finder also extracts text from Form XObjects that are executed in the page contents. For information about Form XObjects, see Section 4.9 in the *PDF Reference*.

NOTE: **PDDocCreateWordFinderUCS** is useful for converting non-Roman text (CJK or Chinese-Japanese-Korean) to Unicode. This method also converts Roman text to Unicode in any document.

PDDocCreateWordFinder also works for non-Roman character set viewers. For **PDDocCreateWordFinder**, words are extracted to the host encoding. Users desiring Unicode output should use **PDDocCreateWordFinderUCS.**

The type of **PDWordFinder** determines the encoding of the string returned by **PDWordGetString**. If **PDDocCreateWordFinderUCS** is used to create the word finder, **PDWordGetString** returns only Unicode.

NOTE: There is no way to detect Unicode strings returned by **PDWordGetString**, since there is no UCS header (FEFF) added to each string returned.

In CJK viewers, words are stored internally using CID encoding. For more information on CIDFonts and related topics, see Section 5.6 in the *PDF Reference*. For detailed information on CIDFonts, see Technical Note #5092, *CID-Keyed Font Technology Overview*, and Technical Note #5014, *Adobe CMap and CIDFont Files Specification*.

Parameters

doc	The document on which the word finder is used.
algVersion	The version of the word-finding algorithm to use. If **WF_LATEST_VERSION** (see PDExpT.h), the most recent version is used. Set to 0 if your plug-in doesn't care.
rdFlags	Word-finding options that determine the tables filled when using **PDWordFinderAcquireWordList**. Must be an OR of one or more of the **Word Finder Sort Order Flags**.
clientData	Pointer to user-supplied data to pass to the newly-created word finder.

Return Value

The newly-created word finder.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDDocCreateWordFinder
PDWordFinderEnumWords
PDWordFinderAcquireWordList
PDWordFinderDestroy
PDWordFilterWord

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020003** or higher.

PDDocDeletePages

```
void PDDocDeletePages (PDDoc doc, ASInt32 firstPage,
ASInt32 lastPage, ProgressMonitor progMon,
void* progMonClientData);
```

Description

Deletes the specified pages, inclusively.

Parameters

doc	The document from which pages are deleted.
firstPage	The page number of the first page to delete. The first page is 0.
lastPage	The page number of the last page to delete.
progMon	A progress monitor. Use **AVAppGetDocProgressMonitor** to obtain the default progress monitor. **NULL** may be passed, in which case no progress monitor is used.
progMonClientData	Pointer to user-supplied data passed to **mon** each time it is called. Should be **NULL** if **progMon** is **NULL**.

Return Value

None

Exceptions

None

Notifications

PDDocWillChangePages
PDDocWillDeletePages
PDDocDidDeletePages
PDDocDidChangePages

Header File

PDCalls.h

Related Methods

PDDocInsertPages
PDDocReplacePages
PDDocMovePage

Availability

Available if **`PI_PDMODEL_VERSION`** (in `PIRequir.h`) is set to **`0x00020000`** or higher.

PDDocDeleteThumbs

```
void PDDocDeleteThumbs (PDDoc doc, ASInt32 firstPage,
ASInt32 lastPage, ProgressMonitor progMon,
void* progMonClientData);
```

Description

Deletes thumbnail images for a range of pages in a document.

Parameters

doc	The document from which thumbnail images are deleted.
firstPage	The page number of the first page in **doc** whose thumbnail image is deleted. The first page is 0.
lastPage	The page number of the last page in **doc** whose thumbnail image is deleted.
progMon	A monitor to call to display thumbnail deletion progress. Use **AVAppGetDocProgressMonitor** to obtain the standard progress monitor to pass for this parameter. **NULL** may be passed, in which case no progress monitor is used.
progMonClientData	Pointer to user-supplied data to pass to **progMon**. Should be **NULL** if **progMon** is **NULL**.

Return Value

None

Exceptions

None

Notifications

PDDocDidChangeThumbs

Header File

PDCalls.h

Related Methods

PDDocCreateThumbs

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDDocEnumFonts

```
void PDDocEnumFonts (PDDoc doc, ASInt32 firstPage,
ASInt32 lastPage, PDFontEnumProc proc, void* clientData,
ProgressMonitor progMon, void* progMonClientData);
```

Description

Enumerates all the fonts in the specified page range. This may take a considerable amount of time for a large page range.

Parameters

doc	The document whose fonts are enumerated.
firstPage	The page number of the first page for which fonts are enumerated. The first page is 0.
lastPage	The page number of the last page for which fonts are enumerated.
proc	User-supplied callback to call for each font. Enumeration terminates if **proc** returns **false**.
clientData	Pointer to user-supplied data to pass to **proc** each time it is called.
progMon	A progress monitor. Use **AVAppGetDocProgressMonitor** to obtain the standard progress monitor. **NULL** may be passed, in which case no progress monitor is used.
progMonClientData	Pointer to user-supplied data to pass to **progMon** each time it is called. Should be **NULL** if **progMon** is **NULL**.

Return Value

None

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDDocEnumLoadedFonts

PDFontEnumCharProcs

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDDocEnumLoadedFonts

```
void PDDocEnumLoadedFonts (PDDoc doc, PDFontEnumProc proc,
void* clientData);
```

Description

Enumerates all the fonts that have been encountered so far. A font is loaded when a page that uses it is processed. This typically happens when a page is drawn or its thumbnail image is created.

Parameters

doc	The document whose loaded fonts are enumerated.
proc	User-supplied callback to call for each loaded font. Enumeration terminates if **proc** returns **false**.
clientData	Pointer to user-supplied data to pass to **proc** each time it is called.

Return Value

None

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDDocEnumFonts
PDFontEnumCharProcs

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDDocEnumResources

```
void PDDocEnumResources (PDDoc pdDoc, ASInt32 startPage,
ASInt32 endPage, ASAtom resourceType, CosObjEnumProc enumProc,
void* clientData);
```

Description

Enumerates the specified type of page resources, for a specified range of pages.

This method enumerates resources in each page's Resources dictionary (ColorSpace resources, Fonts, ExtGState objects, or others). In addition, it looks inside in-line images and page contents to enumerate ColorSpace resources that are not in the **Resources** dictionary, such as **DeviceGray**, **DeviceRGB**, and **DeviceCMYK**.

Parameters

pdDoc	The document whose resources are enumerated.
startPage	The first page whose resources are enumerated. (The first page in a document is 0.)
endPage	The last page whose resources are enumerated.
resourceType	Resource type to enumerate. Must be one of the valid PDF resource types, such as Font, ColorSpace, XObject, Pattern, and so on, described in Section 3.7 in the *PDF Reference*. Pass **ASAtomNull** to enumerate all resource types.
enumProc	User-supplied callback to call once for each resource of the specified type. The resource is presented as a **CosObj**, and it is the first parameter of **enumProc** (the second parameter is unused).
clientData	User-supplied data to pass to **enumProc** each time it is called.

Return Value

None

Exceptions

genErrBadParm
pdErrOpNotPermitted

Notifications

None

Header File

PDCalls.h

Related Methods

PDDocEnumFonts
PDEEnumElements
PDELogDump
PDEObjectDump

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDDocExportNotes

```
CosDoc PDDocExportNotes (PDDoc sourceDoc, ASFileSys fileSys,
ASPathName path, void* progMon, void* monClientData,
PDDocWillExportAnnotCallback exportFilter,
ASInt32* numNotesP);
```

Description

Creates a document containing empty pages plus text annotations (notes) from **sourceDoc**. Does not create a new document if **sourceDoc** contains no notes.

Parameters

sourceDoc	The document from which notes are exported.
fileSys	Currently unused.
path	Currently unused.
progMon	Currently unused.
monClientData	Currently unused.
exportFilter	User-supplied routine that selects which notes to export.
numNotesP	If non-**NULL**, the number of notes exported.

Return Value

The **CosDoc** of the document created to hold the exported notes.

Exceptions

None

Notifications

PDDocWillExportAnnots
PDDocDidExportAnnots

Header File

PDCalls.h

Related Methods

PDDocImportCosDocNotes
PDDocImportNotes

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDDocExportSomeNotes

```
CosDoc PDDocExportSomeNotes (PDDoc doc, ASFileSys unused1,
ASPathName unused2, void* unused3, void* unused4,
PDDocWillExportAnnotCallback exportFilter, PDAnnotArray
pdanArray, ASInt32* numNotesP));
```

Description

Like **PDDocExportNotes** but the caller provides the list of annots to export. This is useful in scenarios when it may be inappropriate to use **PDDocExportNotes** and look for annots on every page. This is an especially important consideration when in a browser.

NOTE: Make sure to explicitly include popups.

Parameters

doc	The document from which notes are exported.
unused1	Currently unused.
unused2	Currently unused.
unused3	Currently unused.
unused4	Currently unused.
exportFilter	User-supplied routine that selects which notes to export.
pdanArray	An array of **PDDocGetNumPages(doc)** **PDAnnotArrayRec**s; one per page.
numNotesP	*(Filled by the method)* If non-**NULL**, the number of notes exported.

Return Value

The **CosDoc** of the document created to hold the exported notes.

Exceptions

None

Notifications

PDDocWillExportAnnots
PDDocDidExportAnnots

Header File

PDCalls.h

Related Methods

PDDocGetXAPMetadata
PDDocImportNotes

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDDocFindPageNumForLabel

```
ASInt32 PDDocFindPageNumForLabel (PDDoc pdDoc,
const char* labelStr, ASInt32 labelLen);
```

Description

Finds the first page in the document with the specified label.

Parameters

pdDoc	The document to search for the page named in **labelStr**.
labelStr	Label of the page to find.
labelLen	Length of **labelStr**.

Return Value

The page index, or -1 if no such page exists.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDDocGetLabelForPageNum
PDDocGetPageLabel
PDDocRemovePageLabel
PDDocSetPageLabel

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDDocFromCosDoc

```
PDDoc PDDocFromCosDoc (CosDoc cosDoc);
```

Description

Gets the **PDDoc** associated with a **CosDoc**.

Parameters

cosDoc	The document for which a **PDDoc** is needed. This is the Cos level object that represents the PDF.

Return Value

The **PDDoc** associated with **cosDoc**.

Exceptions

Raises **genErrBadParm** if the **CosDoc** is not valid.

Raises **pdErrNoPDDocForCosDoc** if there is no **PDDoc** associated with this **cosDoc**.

Notifications

None

Header File

PDCalls.h

Related Methods

AVDocGetPDDoc
PDPageGetDoc
PDDocGetCosDoc

Example

```
CosDoc cosDoc;
PDDoc pdDoc;

pdDoc = PDDocFromCosDoc (cosDoc);
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDDocGetBookmarkRoot

```
PDBookmark PDDocGetBookmarkRoot (PDDoc pdDoc);
```

Description

Gets the root of the document's bookmark tree. The return value is valid even if document's bookmark tree is empty (that is, even if there is no **Outlines** key in the underlying PDF file).

Parameters

pdDoc	Document whose root bookmark is obtained.

Return Value

The document's root bookmark.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

None

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDDocGetCosDoc

```
CosDoc PDDocGetCosDoc (PDDoc doc);
```

Description

Gets a document's **CosDoc**.

Parameters

doc	The document whose **CosDoc** is obtained.

Return Value

The document's **CosDoc**.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

CosObjGetDoc

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDDocGetCryptHandlerClientData

```
void* PDDocGetCryptHandlerClientData (PDDoc doc);
```

Description

Gets the client data for the encryption handler associated with the **PDDoc**. This is the client data provided as a parameter in **PDRegisterCryptHandlerEx**.

Parameters

doc	The **PDDoc** whose encryption handler client data is obtained.

Return Value

Client data for the encryption handler associated with the **PDDoc**. Returns **NULL** if there is no encryption handler or no client data was provided.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDRegisterCryptHandlerEx

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020002** or higher.

PDDocGetFile

```
ASFile PDDocGetFile (PDDoc doc);
```

Description

Gets the **ASfile** for a document.

Parameters

doc	The document whose **ASFile** is obtained.

Return Value

The document's **ASFile**.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

None

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDDocGetFlags

```
ASInt32 PDDocGetFlags (PDDoc doc);
```

Description

Gets information about the document's file and its state.

Parameters

doc	The document whose flags are obtained.

Return Value

Flags field, containing an OR of the **PDDocFlags** values.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDDocSetFlags
PDDocClearFlags

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDDocGetFullScreen

```
ASBool PDDocGetFullScreen (PDDoc pdDoc);
```

Description

Indicates whether or not the document will open in full-screen mode. This provides an alternative to calling **PDDocGetPageMode** to test for **PDFullScreen**.

Parameters

pdDoc	The document to test.

Return Value

true if the **PDDoc** is in full-screen mode, **false** otherwise.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDDocSetFullScreen

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020002** or higher.

PDDocGetID

```
ASInt32 PDDocGetID (PDDoc doc, ASInt32 nElemNum,
ASUns8* buffer, ASInt32 bufferSize);
```

Description

Gets an element of a document's file identifier. See Section 8.3 in the *PDF Reference* for a description of file IDs.

Parameters

doc	The document whose file ID is obtained.
nElemNum	The element number to get from the document's file ID. Must be one of the following: **0** — The permanent ID **1** — The changing ID
buffer	*(Filled by the method)* If buffer is non-**NULL,** then up to the **bufferSize** bytes of the ID will be written to the buffer.
bufferSize	Length of **buffer,** in bytes.

Return Value

The number of bytes in the ID element.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

None

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDDocGetInfo

```
ASInt32 PDDocGetInfo (PDDoc doc, const char* infoKey,
char* buffer, ASInt32 bufSize);
```

Description

Gets the value of a key in a document's Info dictionary. See Section 8.2 in the *PDF Reference* for information about Info dictionaries. All values in the Info dictionary should be strings; other data types such as numbers and booleans should not be used as values in the Info dictionary.

Users may define their own Info dictionary entries. In this case, it is strongly recommended that the key have the developer's prefix assigned by the Adobe Developers Association.

NOTE: For Roman viewers, this text is always stored in the PDFDocEncoding. For non-Roman character set viewers, this text is stored as PDFDocEncoding or Unicode, depending on the file's creator.

Parameters

doc	The document whose Info dictionary key is being obtained.
infoKey	The name of the Info dictionary key whose value is obtained.
buffer	*(Filled by the method)* Buffer containing the value associated with **infoKey**. If **buffer** is **NULL**, the method will just return the number of bytes required.
bufSize	The maximum number of bytes that can be written into **buffer**.

Return Value

If **buffer** is **NULL**, the number of bytes in the specified key's value. It **buffer** is not **NULL**, returns the number of bytes copied into **buffer**, excluding the terminating **NULL**. You must pass at least the **length** + 1 as the buffer size since the routine adds a '\0' terminator to the data, even though the data is not a C string (it can contain embedded '\0's).

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDDocSetInfo

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDDocGetLabelForPageNum

```
ASInt32 PDDocGetLabelForPageNum (PDDoc pdDoc, ASInt32 pageNum,
char* buffer, ASInt32 bufferLen);
```

Description

Retrieves the label string associated with the given page number. The page number is returned in host encoding and is truncated to the length of the buffer.

Parameters

pdDoc	Document containing the page for which a label is requested.
pageNum	The number of the page whose label is requested.
buffer	If a label exists for **pageNum**, it will be placed in this buffer.
bufferLen	Length of the label (null-terminated).

Return Value

The length of the resulting label. If no such page number exists, the resulting string will be the ASCII representation of **pageNum** + 1.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDDocFindPageNumForLabel
PDDocGetPageLabel
PDDocRemovePageLabel
PDDocSetPageLabel

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDDocGetNameTree

```
PDNameTree PDDocGetNameTree (PDDoc thePDDoc, ASAtom theTree);
```

Description

Retrieves a name tree, with the key name specified in **theTree,** from the Names dictionary of **thePDDoc**.

Parameters

thePDDoc	The document containing the name tree desired.
theTree	The name of the tree requested. This can be created by passing a string to the **ASAtomFromString** method.

Return Value

The **PDNameTree** requested.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDNameTreeIsValid
PDDocCreateNameTree
PDDocRemoveNameTree

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDDocGetNewCryptHandler

```
ASAtom PDDocGetNewCryptHandler (PDDoc doc);
```

Description

Gets the specified document's new security handler (that is, the security handler that will be used after the document is saved).

If the document does not have a new security handler, returns the document's current security handler.

Parameters

doc	The document whose new security handler is obtained.

Return Value

The **ASAtom** corresponding to the **pdfName** of the document's new security handler. Returns **ASAtomNull** if the document does not have a new security handler.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDDocSetNewCryptHandler
PDRegisterCryptHandler

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDDocGetNewSecurityData

```
void* PDDocGetNewSecurityData (PDDoc doc);
```

Description

Gets the security data structure for the specified document's new security handler. Use **PDDocGetSecurityData** to get the security data structure for the document's current security handler.

Parameters

doc	The document whose new security data structure is obtained.

Return Value

The security data structure for the document's new security handler.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDDocGetSecurityData
PDDocNewSecurityData
PDDocSetNewCryptHandler
PDDocSetNewSecurityData

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDDocGetNewSecurityInfo

```
void PDDocGetNewSecurityInfo (PDDoc pdDoc, ASUns32* secInfo);
```

Description

Gets the security information from the specified document's new security handler. Calls the **PDCryptGetSecurityInfoProc** callback of the document's new security handler. No permissions are required to call this method.

Parameters

pdDoc	The document whose new security information is obtained.
secInfo	*(Filled by the method)* The document's new security information. The value mst be an OR of the **Security Info Flags**. Set to **pdInfoCanPrint** | **pdInfoCanEdit** | **pdInfoCanCopy** | **pdInfoCanEditNotes** (see **PDPerms**) if the document's new security handler does not have a **PDCryptGetSecurityInfoProc** callback.

Return Value

None

Exceptions

Raises only those exceptions raised by the new security handler's **PDCryptGetSecurityInfoProc** callback.

Notifications

None

Header File

PDCalls.h

Related Methods

PDRegisterCryptHandler

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDDocGetNumPages

```
ASInt32 PDDocGetNumPages (PDDoc doc);
```

Description

Gets the number of pages in a document.

Parameters

doc	The document for which the number of pages is obtained.

Return Value

The number of pages in the document. Remember to subtract one from this value if you are going to pass it to a PD-level method that takes a zero-based page number.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

None

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDDocGetNumThreads

```
ASInt32 PDDocGetNumThreads (PDDoc doc);
```

Description

Gets the number of article threads in a document.

Parameters

doc	The document whose article thread count is obtained.

Return Value

The number of article threads in the document.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

None

Example

```
size = PDDocGetNumThreads(pdDoc);
if (size)
{
     for(i = 0;i<size;i++)
     {
            /* get the right thread */
            thread = PDDocGetThread(pdDoc, i);
            threadIndex = i;
            len = PDThreadGetInfo(thread, "Title",
                  msg, sizeof(msg));
            if(!strcmp(msg, "Contents"))
                  break;
     }
}
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to 0x00020000 or higher.

PDDocGetOpenAction

```
PDAction PDDocGetOpenAction (PDDoc doc);
```

Description

Gets the value of the **OpenAction** key in the Catalog dictionary, which is the action performed when the document is opened. After you obtain the action, you can execute it with **AVDocPerformAction**.

Parameters

doc	The document whose open action is obtained.

Return Value

The document's open action. Invalid if there is no **OpenAction** key in the Catalog dictionary (this can be tested with **PDActionIsValid**).

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

AVDocPerformAction
PDDocSetOpenAction

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDDocGetPageLabel

```
PDPageLabel PDDocGetPageLabel (PDDoc pdDoc, ASInt32 pageNum,
ASInt32* firstPage, ASInt32* lastPage);
```

Description

Returns the label that is in effect for the given page.

Parameters

pdDoc	The document for which a page label is desired.
pageNum	The page number of the page for which a label is requested.
firstPage	If non-**NULL**, the number of the page that the page label is attached to.
lastPage	If non-**NULL**, the number of the next higher page that has a label object attached to it. If there is no such object, the number of pages in the document. Setting **lastPage** to non-**NULL** forces the implementation to perform another search of the page label tree, with some slight performance impact.

Return Value

The label that is in effect for the given page. If there is no label object in effect, this method returns an invalid page label object and **firstPage** and **lastPage** will be set to -1.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDDocFindPageNumForLabel
PDDocGetLabelForPageNum
PDDocRemovePageLabel
PDDocSetPageLabel

Availability

Available if **`PI_PDMODEL_VERSION`** (in `PIRequir.h`) is set to **`0x00040000`** or higher.

PDDocGetPageMode

```
PDPageMode PDDocGetPageMode (PDDoc doc);
```

Description

Gets the value of the **PageMode** key in the Catalog dictionary.

NOTE: **PDDocGetFullScreen** should be used when the page mode is set to full screen.

Parameters

doc	The document whose page mode is obtained.

Return Value

Page mode value from PDF **Catalog** dictionary.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDDocSetPageMode
AVDocSetViewMode

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDDocGetPageObjByNum

```
CosObj PDDocGetPageObjByNum(PDDoc pdd, ASInt32 nPage);
```

Description

Returns the page Cos object corresponding to the given page number.

Parameters

pdd	The **PDDoc** containing the given page.
nPage	The page number.

Return Value

A Cos object representing the page, or **NULL**.

Exceptions

genErrBadParm
pdErrBadPageObj

Notifications

None

Header File

PDCalls.h

Related Methods

None

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDDocGetPermissions

```
PDPerms PDDocGetPermissions (PDDoc doc);
```

Description

Gets the permissions for the specified document. You can set permissions with **PDDocAuthorize**.

Parameters

doc	The document whose permissions are obtained.

Return Value

A bit field indicating the document's permissions. It is an OR of the **PDPerms** values.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDDocAuthorize

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDDocGetSecurityData

```
void* PDDocGetSecurityData (PDDoc doc);
```

Description

Gets the security data structure for the specified document's current security handler. Use **PDDocGetNewSecurityData** to get the data structure for the document's new security handler.

Parameters

doc	The document whose security data structure is obtained.

Return Value

The document's current security data structure.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDDocGetNewSecurityData

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDDocGetStructTreeRoot

```
ASBool PDDocGetStructTreeRoot (PDDoc pdDoc,
PDSTreeRoot* treeRoot);
```

Description

Gets the structure tree root for a document.

Parameters

pdDoc	The **PDDoc** whose root is obtained.
treeRoot	*(Filled by the method)* The structure tree root.

Return Value

true if structure tree root found, **false** otherwise.

Exceptions

None

Notifications

None

Header File

PDSReadCalls.h

Related Methods

PDDocCreateStructTreeRoot
PDDocRemoveStructTreeRoot

Availability

Available if **PI_PDS_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDDocGetThread

```
PDThread PDDocGetThread (PDDoc doc, ASInt32 index);
```

Description

Gets an article thread having the specified index.

Parameters

doc	The document containing the article thread.
index	The index of the article thread to obtain.

Return Value

The specified article thread.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDDocAddThread
PDDocRemoveThread
PDThreadIsValid

Example

```
size = PDDocGetNumThreads(pdDoc);
if(size)
{
     for(i = 0;i<size;i++)
     {
            /* get the right thread */
            thread = PDDocGetThread(pdDoc, i);
            threadIndex = i;
            len = PDThreadGetInfo(thread, "Title",
                  msg, sizeof(msg));
            if(!strcmp(msg, "Contents"))
                  break;
     }
}
```

Availability

Available if **`PI_PDMODEL_VERSION`** (in `PIRequir.h`) is set to **`0x00020000`** or higher.

PDDocGetThreadIndex

```
ASInt32 PDDocGetThreadIndex (PDDoc doc, PDThread thread);
```

Description

Gets the index of the specified article thread.

Parameters

doc	The document containing the thread.
thread	The thread whose index is obtained.

Return Value

The index of **thread** in **doc**. Returns –1 if **thread** is not in **doc**.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

None

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDDocGetVersion

```
void PDDocGetVersion (PDDoc doc, ASInt16* majorP,
ASInt16* minorP);
```

Description

Gets the major and minor PDF document versions. This is the PDF version of the document, which is specified in the header of a PDF file in the string "**%PDF-xx.yy**" where **xx** is the major version and **yy** is the minor version. For example, version 1.2 has the string "**%PDF-1.2**". See Section H.1 in the *PDF Reference*.

Parameters

doc	The document whose version is obtained.
majorP	*(Filled by the method)* The major version number.
minorP	*(Filled by the method)* The minor version number.

Return Value

None

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

None

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDDocGetWordFinder

```
PDWordFinder PDDocGetWordFinder (PDDoc docP,
ASInt16 WXEVersion);
```

Description

Gets the word finder associated with a document. It is not necessary to destroy the word finder returned by this method.

Parameters

pdDoc	The document whose word finder is obtained.
WXEVersion	The version of the word finder to get.

Return Value

The document's word finder. Returns **NULL** if the document does not have a word finder or its version does not match the version requested.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDDocCreateWordFinder
PDDocCreateWordFinderUCS

Example

```
PDWordFinder WordFinder =
     PDDocGetWordFinder(pdDoc,
     WF_LATEST_VERSION );
if(WordFinder)
{
     PDWordFinderEnumWords(WordFinder,
            PageNum, ASCallbackCreateProto(
            PDWordProc, &WordCounterProc), NULL);
}
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to 0x00020000 or higher.

PDDocGetXAPMetadata

```
ASText PDDocGetXAPMetadata (PDDoc pdDoc);
```

Description

Gets the XAP metadata associated with a document. Returns an **ASText** whose text is the XML text of the XAP metadata associated with the document **pdDoc**. The **ASText** becomes the property of the client, who is free to alter or destroy it.

The XAP metadata returned will always represent all the properties in **pdDoc**'s Info dictionary.

Parameters

pdDoc	The document containing the metadata.

Return Value

An **ASText** object containing the XAP metadata associated with the document **pdDoc**.

Exceptions

pdMetadataErrCouldntCreateMetaXAP

Notifications

None

Header File

PDMetadataCalls.h

Related Methods

PDDocSetXAPMetadata

Availability

Available if **PI_PDMETADATA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDDocImportCosDocNotes

```
ASInt32 PDDocImportCosDocNotes (PDDoc doc, CosDoc src,
const char* noteTitle, ASInt32 noteTitleLen,
PDColorValue color, void* progMon, void* monClientData,
PDDocWillImportAnnotCallback importFilter);
```

Description

Adds text annotations from **sourceDoc** to **doc**.

Parameters

doc	The document that will receive the imported annotations.
src	The document from which the annotations will be imported.
noteTitle	Not currently used.
noteTitleLen	Not currently used.
color	If non-**NULL**, the color attribute of imported annotations. color indicates the color space (**PDDeviceGray**, **PDDeviceRGB**, **PDDeviceCMYK**), and color values for the annotation.
progMon	If supplied, a procedure to call regularly to update a progress bar for the user.
monClientData	If supplied, a pointer to private data buffer used by **progMon**.
importFilter	A user-supplied procedure that will be called to provide a filtering process, allowing only desired annotations to import.

Return Value

The number of notes imported.

Exceptions

Raises an exception if the given object has the wrong Cos type. Also raises exceptions if storage is exhausted or file access fails.

Notifications

PDDocDidImportAnnots
PDDocWillImportAnnots

Header File

PDCalls.h

Related Methods

PDDocImportNotes

PDDocExportNotes

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDDocImportNotes

```
ASInt32 PDDocImportNotes (PDDoc doc, PDDoc sourceDoc,
void* progMon, void* monClientData,
PDDocWillImportAnnotCallback importFilter);
```

Description

Adds text annotations (notes) from **sourceDoc** to **doc**.

Parameters

doc	The document to which the notes are exported to.
sourceDoc	The document from which the notes are exported from.
progMon	User-supplied progress monitor.
monClientData	Data supplied by the monitoring routine.
importFilter	User-supplied filter which determines what type of notes will be exported.

Return Value

The number of notes imported.

Exceptions

Raises an exception if the given object has the wrong Cos type. Also raises exceptions if storage is exhausted or file access fails.

Notifications

PDDocDidImportAnnots
PDDocWillImportAnnots

Header File

PDCalls.h

Related Methods

PDDocExportNotes
PDDocImportCosDocNotes

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDDocInsertPages

```
void PDDocInsertPages (PDDoc doc, ASInt32 mergeAfterThisPage,
PDDoc doc2, ASInt32 startPage, ASInt32 numPages,
ASUns16 insertFlags, ProgressMonitor progMon,
void* progMonClientData, CancelProc cancelProc,
void* cancelProcClientData);
```

Description

Inserts **numPages** pages from **doc2** into **doc**. All annotations, and anything else associated with the page (such as a thumbnail image) are copied from the **doc2** pages to the new pages in **doc**. This method will not insert if **doc** equals **doc2**.

Parameters

doc	The document into which pages are inserted. This document must have at least one page.
mergeAfterThisPage	The page number in **doc** after which pages from **doc2** are inserted. The first page is 0. If **PDBeforeFirstPage** (see PDExpT.h) is used, the pages are inserted before the first page in **doc**. Use **PDLastPage** to insert pages after the last page in **doc**.
doc2	The document containing the pages that are inserted into **doc**.
startPage	The page number of the first page in **doc2** to insert into **doc**. The first page is 0.
numPages	The number of pages in **doc2** to insert into **doc**. Use **PDAllPages** to insert all pages from **doc2** into **doc**.

insertFlags	Flags that determine what additional information is copied from **doc2** into **doc**. Must be an OR of the following (see PDExpT.h): **PDInsertAll** — Inserts the entire document **doc2** into the document **doc**. This operation not only inserts the pages themselves, but also merges other document data from **doc2** into **doc**. In particular, the following happens: 1. The bookmark tree of **doc2** is merged into the bookmark tree of **doc** by copying it as a new first-level subtree of **doc**'s bookmark tree root, of which it becomes the last child. If **doc** has no bookmark tree, it acquires one identical to the bookmark tree from **doc2**. 2. Named destinations from **doc2** (of PDF 1.1 and later) are copied into **doc**. If there are named destinations in **doc2** with the same name as some named destination in **doc**, the ones in **doc** retain their names and the copied named destinations are given new names based on the old ones with distinguishing digits added. Actions and bookmarks referring to the old names are made to refer to the new names after being copied into **doc**. 3. Document logical structure from **doc2** is copied into **doc**. The top-level children of the structure tree root of **doc2** are copied as new top-level children of the structure tree root of **doc**; a structure tree root is created in **doc** if there was none before. The role maps of the two structure trees are merged, with name conflicts resolved in favor of the role mappings present in **doc**. Attribute objects are not copied, nor is class map information from **doc2** merged into that for **doc**. If **PDInsertAll** flag is *not* set, pages copied from **doc2** into **doc** will have their structure back pointer information stripped off. **PDInsertBookmarks** — Inserts bookmarks as well as pages. **PDInsertThreads** — Inserts threads as well as pages.
progMon	A progress monitor. Use **AVAppGetDocProgressMonitor** to obtain the default progress monitor. **NULL** may be passed, in which case no progress monitor is used.
progMonClientData	Pointer to user-supplied data to pass to **progMon** each time it is called. Should be **NULL** if **progMon** is **NULL**.
cancelProc	A cancel procedure. Use **AVAppGetCancelProc** to obtain the current cancel procedure. May be **NULL**, in which case no cancel proc is used.
cancelProcClientData	Pointer to user-supplied data to pass to **cancelProc** each time it is called. Should be **NULL** if **cancelProc** is **NULL**.

Return Value

None

Exceptions

Among others:

Raises **pdErrOpNotPermitted** unless **doc** is editable and **doc2** is not encrypted or the owner opened it.

Raises **pdErrCantUseNewVersion** if **doc2** is a newer major version than the Acrobat viewer understands.

Raises **pdErrTooManyPagesForInsert** if the insertion would result in a document with too many pages.

Raises **genErrBadParm** if **mergeAfterThisPage** is an invalid page number or **doc** has no pages.

Raises **genErrNoMemory** if there is insufficient memory to perform the insertion.

Raises **pdErrWhileRecoverInsertPages** if an error occurs while trying to recover from an error during inserting.

Notifications

PDDocWillInsertPages
PDDocDidInsertPages
PDDocDidChangePages
PDDocPrintingTiledPage
PDDocDidChangeThumbs
PDDocDidAddThread

Header File

PDCalls.h

Related Methods

AVAppGetCancelProc
AVAppGetDocProgressMonitor
PDDocCreatePage
PDDocDeletePages
PDDocMovePage
PDDocReplacePages

Example

```
/* Extract pages from a document and put them in a new document. */
ASFixedRect mediaBoxRect;
PDDoc oldDoc, newDoc = PDDocCreate();

PDDocCreatePage(newDoc, 0, mediaBoxRect);
PDDocInsertPages(newDoc, mergeAfterThisPage, oldDoc, start, numPages,
flags, NULL, NULL, NULL, NULL);
PDDocDeletePages(newDoc, 0, 1, NULL, NULL);
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDDocMovePage

```
void PDDocMovePage (PDDoc doc, ASInt32 moveToAfterThisPage,
ASInt32 pageToMove);
```

Description

Moves one page in a document.

Parameters

doc	The document in which a page is moved.
moveToAfterThisPage	The new location of the page to move. The first page is 0. May either be a page number, or the constant **PDBeforeFirstPage** (see PDExpT.h).
pageToMove	The page number of the page to move.

Return Value

None

Exceptions

Among others:

Raises **genErrBadParm** if **moveAfterThisPage** or **pageToMove** is invalid.

Notifications

PDDocWillMovePages
PDDocDidMovePages
PDDocDidChangePages
PDDocWillChangePages

Header File

PDCalls.h

Related Methods

PDDocInsertPages
PDDocReplacePages
PDDocDeletePages

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDDocNewSecurityData

```
void* PDDocNewSecurityData (PDDoc doc);
```

Description

Creates a security data structure appropriate for the specified document's new security handler. The new security handler must have been previously set using **PDDocSetNewCryptHandler**. The structure is created by calling the new security handler's **PDCryptNewSecurityDataProc**.

After calling **PDDocNewSecurityData**, fill the structure as appropriate, then call **PDDocSetNewSecurityData** with the structure. **PDDocSetNewSecurityData** frees the data using **ASfree**.

Parameters

doc	The document for which a security data structure is created.

Return Value

The newly-created security data structure.

Exceptions

Raises **pdErrOpNotPermitted** if **pdPermSecure** (see **PDPerms**) has not been granted for **doc**.

Raises **pdErrNeedCryptHandler** if the document does not have a new security handler.

Notifications

None

Header File

PDCalls.h

Related Methods

PDDocSetNewCryptHandler
PDDocSetNewSecurityData

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDDocOpen

```
PDDoc PDDocOpen (ASPathName fileName, ASFileSys fileSys,
PDAuthProc authProc, ASBool doRepair);
```

Description

Opens the specified document. If the document is already open, returns a reference to the already opened **PDDoc**. You must call **PDDocClose** once for every successful open. If the call fails and the exception is **pdErrNeedRebuild**, then call again with **doRepair** set to **true**. This allows the application to decide whether to perform the time-consuming repair operation.

Parameters

fileName	Pathname to the file, specified in whatever format is correct for **fileSys.**
fileSys	Pointer to an **ASFileSysRec** containing the file system in which the file resides. If **NULL**, uses the default file system.
authProc	Authorization callback, called only if the file has been secured. This callback should obtain whatever information is needed to determine whether or not the user is authorized to open the file, then call **PDDocAuthorize** (which returns the permissions that the authentication data enables). The Acrobat viewer's built-in authorization procedure requires the user to enter a password, and allows the user to try three times before giving up. If the **authProc** requires data, use **PDDocOpenEx** instead of **PDDocOpen**.
doRepair	If **true**, attempt to repair the file if it is damaged. If **false**, do not attempt to repair the file if it is damaged.

Return Value

The newly-opened document.

Exceptions

Among others:

Raises **pdErrNeedPassword** if the file is encrypted and **authProc** is **NULL** or returns **false**.

Raises **pdErrNotEnoughMemoryToOpenDoc** or **genErrNoMemory** if there is insufficient memory to open the document.

Raises **pdErrNeedRebuild** if the document needs to be rebuilt, and **doRepair** is **false**.

Raises **pdErrBadOutlineObj** if the Outlines object appears to be invalid (if the value of the **Outlines** key in the Catalog is not a **NULL** or dictionary object).

Raises **pdErrBadRootObj** if the Catalog object (as returned by **CosDocGetRoot**) is not a dictionary.

Raises **pdErrBadBaseObj** if the Pages tree appears to be invalid (if the value of the **Pages** key in the Catalog is not a **NULL** or dictionary object).

Raises **pdErrTooManyPagesForOpen** if the document contains too many pages.

Raises **cosSynErrNoHeader** if the document's header appears to be bad.

Raises **cosSynErrNoStartXRef** if no end-of-file line can be located.

Raises **cosErrRebuildFailed** if **doRepair** is **true**, and rebuild failed.

Notifications

None

Header File

PDCalls.h

Related Methods

PDDocClose
PDDocCreate
PDDocAuthorize
PDDocOpenEx
PDDocOpenFromASFile
PDDocOpenFromASFileEx

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDDocOpenEx

```
PDDoc PDDocOpenEx (ASPathName fileName, ASFileSys fileSys,
PDAuthProcEx authProcEx, void* authProcClientData,
ASBool doRepair);
```

Description

Opens the specified document. If the document is already open, returns a reference to the already opened **PDDoc**. You must call **PDDocClose** once for every successful open. If the call fails and the exception is **pdErrNeedRebuild**, then call again with **doRepair true**. This allows the application to decide whether to perform the time-consuming repair operation.

Parameters

fileName	Pathname to the file, specified in whatever format is correct for **fileSys.**
fileSys	Pointer to an **ASFileSysRec** containing the file system in which the file resides.
authProcEx	Authorization callback, called only if the file is encrypted. This callback should obtain whatever information is needed to determine whether or not the user is authorized to open the file, then call **PDDocAuthorize** (which returns the permissions that the authentication data enables). The Acrobat viewer's built-in authorization procedure requires the user to enter a password, and allows the user to try three times before giving up.
authProcClientData	Pointer to user-supplied data to pass to **authProcEx** each time it is called.
doRepair	If **true**, attempt to repair the file if it is damaged. If **false**, do not attempt to repair the file if it is damaged.

Return Value

The newly-opened document.

Exceptions

Among others:

Raises **pdErrNeedPassword** if the file is encrypted and **authProcEx** is **NULL** or returns **false**.

Raises **pdErrNotEnoughMemoryToOpenDoc** or **genErrNoMemory** if there is insufficient memory to open the document.

Raises **pdErrNeedRebuild** if the document needs to be rebuilt, and **doRepair** is **false**.

Raises **pdErrBadOutlineObj** if the Outlines object appears to be invalid (if the value of the **Outlines** key in the Catalog is not a **NULL** or dictionary object).

Raises **pdErrBadRootObj** if the Catalog object (as returned by **CosDocGetRoot**) is not a dictionary.

Raises **pdErrBadBaseObj** if the Pages tree appears to be invalid (if the value of the **Pages** key in the Catalog is not a **NULL** or dictionary object).

Raises **pdErrTooManyPagesForOpen** if the document contains too many pages.

Raises **cosSynErrNoHeader** if the document's header appears to be bad.

Raises **cosSynErrNoStartXRef** if no end-of-file line can be located.

Raises **cosErrRebuildFailed** if **doRepair** is **true**, and rebuild failed.

Notifications

None

Header File

PDCalls.h

Related Methods

PDDocClose
PDDocCreate
PDDocAuthorize
PDDocOpen
PDDocOpenFromASFile
PDDocOpenFromASFileEx

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020002** or higher.

PDDocOpenFromASFile

```
PDDoc PDDocOpenFromASFile (ASFile aFile, PDAuthProc authProc,
ASBool doRepair);
```

Description

Opens the document specified by the **ASFile**. **aFile** must be a valid **ASFile**. It is the caller's responsibility to dispose of the **ASFile** after calling **PDDocClose**.

This method is useful when the document referenced by the **ASFile** is not on the local machine, and it is being retrieved incrementally using the multi-read protocol of an **ASFileSys**. If the bytes required to open a **PDDoc** are not yet available, this method will raise the exception **fileErrBytesNotReady**. The client should call **PDDocOpenFromASFile** until this exception is no longer raised.

Parameters

aFile	The **ASFile** to open. The **ASFile** should be released after the **PDDoc** is closed.
authProc	Authorization callback, called only if the file is encrypted. This callback should obtain whatever information is needed to determine whether or not the user is authorized to open the file, then call **PDDocAuthorize** (which returns the permissions that the authentication data enables). The Acrobat viewer's built-in authorization procedure requires the user to enter a password, and allows the user to try three times before giving up.
doRepair	If **true**, attempt to repair the file if it is damaged. If **false**, do not attempt to repair the file if it is damaged.

Return Value

A valid **PDDoc** if successfully opened.

Exceptions

Raises **pdErrNeedPassword** if the file is encrypted and **authProc** is **NULL** or returns **false**.

Raises **fileErrBytesNotReady** if the bytes required to open a **PDDoc** are not yet available.

Notifications

None

Header File

PDCalls.h

Related Methods

PDDocClose
PDDocOpen
PDDocOpenEx
PDDocOpenFromASFileEx

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020002** or higher.

PDDocOpenFromASFileEx

```
PDDoc PDDocOpenFromASFileEx (ASFile aFile,
PDAuthProcEx authProcEx, void* authProcClientData,
ASBool doRepair);
```

Description

Opens the document specified by the **ASFile**. **aFile** must be a valid **ASFile**. It is the caller's responsibility to dispose of the **ASFile** after calling **PDDocClose**.

This method is useful when the document referenced by the **ASFile** is not on the local machine, and it is being retrieved incrementally using the multiread protocol of an **ASFileSys**. If the bytes required to open a **PDDoc** are not yet available, this method will raise the exception **fileErrBytesNotReady**. The client should call **PDDocOpenFromASFile** until this exception is no longer raised.

Parameters

aFile	The **ASFile** to open. The **ASFile** should be released after the **PDDoc** is closed.
authProcEx	Authorization callback, called only if the file is encrypted. This callback should obtain whatever information is needed to determine whether or not the user is authorized to open the file, then call **PDDocAuthorize** (which returns the permissions that the authentication data enables). The Acrobat viewer's built-in authorization procedure requires the user to enter a password, and allows the user to try three times before giving up.
authProcClientData	Pointer to user-supplied data to pass to **authProcEx** each time it is called.
doRepair	If **true**, attempt to repair the file if it is damaged. If **false**, do not attempt to repair the file if it is damaged.

Return Value

A valid **PDDoc** if successfully opened.

Exceptions

Raises **pdErrNeedPassword** if the file is encrypted and **authProc** is **NULL** or returns **false**.

Raises **fileErrBytesNotReady** if the bytes required to open a **PDDoc** are not yet available.

Notifications

None

Header File

PDCalls.h

Related Methods

PDDocClose
PDDocOpen
PDDocOpenEx
PDDocOpenFromASFile

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020002** or higher.

PDDocOpenWithParams

```
PDDoc PDDocOpenWithParams (PDDocOpenParams openParams);
```

Description

Opens the document specified by the **ASFile** or **ASFileSys**/**ASPathName**. If both are set, the **ASFile** is used and the **fileSys/pathName** is ignored.

Parameters

openParams	A structure that defines which PDF file is opened. Parameters like: filename, file system, an authorization procedure, and a set of flags that define what permissions the user has on a file.

Return Value

The **PDDoc** for the PDF document described by the structure passed in **openParams**.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDDocOpen
PDDocOpenEx
PDDocOpenFromASFile
PDDocOpenFromASFileEx

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDDocPermRequest

```
PDPermReqStatus PDDocPermRequest (PDDoc pdDoc,
PDPermReqObj reqObj, PDPermReqOpr reqOpr, void *authData);
```

Description

Checks the permissions that the user has placed on the specified document using a new permission form. This method first checks the requested object and operation in a cached list. If the object doesn't exist, it calls a security handler. You should be using the **PDDocPermRequest** method rather than **PDPerms**.

When this method is called, Acrobat calls the document's security handler via **PDCryptAuthorizeExProc** to request permissions for the operation. If the document's security handler doesn't support this new (Acrobat 5.0) call, **PDCryptAuthorizeProc** will be called instead. In the latter case, Acrobat will interpret the returned **PDPerms**.

NOTE: This method replaces **PDDocAuthorize** and **PDDocGetPermissions**.

Parameters

pdDoc	The **PDDoc** whose permissions are being requested.
reqObj	Object description.
reqOpr	Operation description.
authData	A pointer to an authorization data structure.

Return Value

PDPermReqStatus

Exceptions

Numerous

Notifications

None

Header File

PDCalls.h

Related Methods

PDDocAuthorize
PDDocGetPermissions

Availability

Available if **`PI_PDMODEL_VERSION`** (in `PIRequir.h`) is set to **`0x00050000`** or higher.

PDDocReadAhead

```
void PDDocReadAhead (PDDoc doc, ASUns32 flags,
void* clientData);
```

Description

Used for page-at-a-time downloading and byte-serving Acrobat data. If a document is being viewed over a slow file system, **PDDocReadAhead** issues a byte range request for all the data associated with the flags in **flags**.

Parameters

doc	The document being read.
flags	Flags describing type of data to read ahead. Must be OR of flags in **PDDocReadAhead Flags**.
clientData	Currently unused.

Return Value

None

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

None

Example

```
PDDocReadAhead(pdDoc,
     kPDDocReadAheadAcroForms, (void *) NULL);
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020002** or higher.

PDDocReadAheadPages

```
void PDDocReadAheadPages (PDDoc doc, ASInt32 startPage,
ASInt32 nPages);
```

Description

Reads ahead **nPages** starting at **startPage** (if the file is linearized).

Parameters

doc	The document for which pages are read ahead.
startPage	The page for which read ahead is initiated.
nPages	The number of pages to read ahead.

Return Value

None

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

None

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDDocRelease

```
void PDDocRelease (PDDoc doc);
```

Description

Decrements a document's reference count. The document will not be closed until the reference count is zero, or the application terminates.

Parameters

doc	The document whose reference count is decremented.

Return Value

None

Exceptions

genErrBadParm

Notifications

None

Header File

PDCalls.h

Related Methods

PDDocAcquire

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDDocRemoveOpenAction

```
void PDDocRemoveOpenAction (PDDoc doc);
```

Description

Removes the value of the **OpenAction** key in the Catalog dictionary. The value is the action performed when the document is opened.

Parameters

doc	The document whose open action is removed.

Return Value

None

Exceptions

genErrBadParm
pdErrOpNotPermitted

Notifications

None

Header File

PDCalls.h

Related Methods

PDDocGetOpenAction
PDDocSetOpenAction

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDDocRemoveNameTree

```
void PDDocRemoveNameTree (PDDoc thePDDoc, ASAtom theTree);
```

Description

Removes the name tree inside the Names dictionary with the specified key name. Does nothing if no object with that name exists.

Parameters

thePDDoc	The document from which a name tree is removed.
theTree	The name tree to remove.

Return Value

None

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDDocCreateNameTree
PDDocGetNameTree

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDDocRemovePageLabel

```
void PDDocRemovePageLabel (PDDoc pdDoc, ASInt32 pageNum);
```

Description

Removes the page label that is attached to the specified page, effectively merging the specified range with the previous page label sequence.

Parameters

pdDoc	The document from which a page label is removed.
pageNum	The page from which the page label is removed.

Return Value

None

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDDocSetPageLabel
PDDocGetPageLabel

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDDocRemoveStructTreeRoot

```
void PDDocRemoveStructTreeRoot (PDDoc pdDoc);
```

Description

Removes, but does *not* destroy, the specified **StructTreeRoot** element from the specified **PDDoc**.

Parameters

pdDoc	The **PDDoc** for which the **StructTreeRoot** element is removed.

Return Value

None

Exceptions

None

Notifications

None

Header File

PDSWriteCalls.h

Related Methods

PDDocCreateStructTreeRoot
PDDocGetStructTreeRoot

Availability

Available if **PI_PDS_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDDocRemoveThread

```
void PDDocRemoveThread (PDDoc doc, ASInt32 index);
```

Description

Removes an article thread from a document. If you also wish to destroy the thread, use **PDThreadDestroy** after calling **PDDocRemoveThread**.

Parameters

doc	The document from which the thread is removed.
index	The index of the thread to remove.

Return Value

None

Exceptions

None

Notifications

PDDocWillRemoveThread
PDDocDidRemoveThread

Header File

PDCalls.h

Related Methods

PDThreadDestroy
PDDocAddThread
PDBeadGetThread

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDDocReplacePages

```
void PDDocReplacePages (PDDoc doc, ASInt32 startPage,
PDDoc doc2, ASInt32 startPageDoc2, ASInt32 numPages,
ASBool mergeTextAnnots, ProgressMonitor progMon,
void* progMonClientData, CancelProc cancelProc,
void* cancelProcClientData);
```

Description

Replaces the specified range of pages in one document with pages from anther. The contents, resources, size and rotation of the pages are replaced. Bookmarks are *not* copied, because they are attached to the document, not to individual pages.

NOTE: Annotations in the replaced pages are not replaced and remain with the page. Use **PDDocDeletePages** to remove annotations.

Parameters

doc	The document in which pages are replaced.
startPage	The first page number in **doc** to replace. The first page is 0.
doc2	The document from which pages are copied into **doc**.
startPageDoc2	The page number of the first page in **doc2** to copy. The first page is 0.
numPages	The number of pages to replace.
mergeTextAnnots	If **true**, text annotations from **doc2** are appended if they are different than all existing annotations on the page in **doc**. No other types of annotations are copied.
progMon	A progress monitor. Use **AVAppGetDocProgressMonitor** to obtain the default progress monitor. **NULL** may be passed, in which case no progress monitor is used.
progMonClientData	Pointer to user-supplied data to pass to **progMon** each time it is called. Should be **NULL** if **progMon** is **NULL**.
cancelProc	Currently unused. A cancel procedure. Use **AVAppGetCancelProc** to obtain the current cancel procedure. May be **NULL**, in which case no cancel proc is used.
cancelProcClientData	Pointer to user-supplied data to pass to **cancelProc** each time it is called. Should be **NULL** if **cancelProc** is **NULL**.

Return Value

None

Exceptions

Among others:

Raises **pdErrOpNotPermitted** unless **doc** is editable and **doc2** is not encrypted or the owner opened it.

Raises **pdErrCantUseNewVersion** if **doc2** is a newer major version than the Acrobat viewer understands.

Raises **genErrBadParm** if **numPages** < 1, 1 **startPage** < 0, **startPage** + **numPages** is greater than the number of pages in **doc**, **startPageDoc2** < 0, or **startPageDoc2** + **numPages** is greater than the number of pages in **doc2**.

Raises **genErrNoMemory** if there is insufficient memory to perform the insertion.

Notifications

PDDocWillReplacePages
PDDocDidReplacePages
PDDocDidChangePages
PDDocWillChangePages

Header File

PDCalls.h

Related Methods

PDDocInsertPages
PDDocMovePage
PDDocDeletePages
PDDocCreatePage

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDDocSave

```
void PDDocSave (PDDoc doc, PDSaveFlags saveFlags,
ASPathName newPath, ASFileSys fileSys,
ProgressMonitor progMon, void* progMonClientData);
```

Description

Saves a document to disk. If a full save is requested to the original path, the file is saved to a file system-determined temporary file, the old file is deleted, and the temporary file is renamed to **newPath**. You must call **PDDocClose** to release resources; do *not* call **PDDocRelease**.

If the document was created with **PDDocCreate**, at least one page must be added using **PDDocCreatePage** or **PDDocInsertPages** before Acrobat can save the document.

You can replace this method with your own version, using **HFTReplaceEntry**.

A full save with linearization optimizes the PDF file. During optimization, *all* objects in a PDF file are rearranged, many of them acquiring not only a new file position, but also a new Cos object number. At the end of the save operation, Acrobat flushes its information of the PD layer and below to synchronize its in-memory state with the new disk file just written.

It is crucial that all objects that have been acquired from a PDDoc be released before Acrobat attempts to flush its in-memory state. This includes any object that was acquired with a **PD*Acquire** method, such as **PDDocAcquirePage** or **PDBeadAcquirePage**. Failing to release these objects before the full save results in a save error, and the resulting PDF file is not valid. In addition, all PD level objects and Cos objects derived from the **PDDoc** are *no longer valid* after the full save. Attempting to use these objects after a full save produces undefined results.

Plug-ins and applications should register for the **PDDocWillSaveEx** and **PDDocDidSave** notifications so that they can clean up appropriately. See these notifications for more information on releasing and reacquiring objects from the **PDDoc**.

Parameters

doc	The document to save.
saveFlags	A bit field composed of an OR of the **PDSaveFlags** values.

newPath	The path to which the file is saved. A path must be specified when either **PDSaveFull** or **PDSaveCopy** are used for **saveFlags**. If **PDSaveIncremental** is specified in **saveFlags**, then **newPath** should be **NULL**. If **PDSaveFull** is specified and **newPath** is the same as the file's original path, the new file is saved to a file system-determined temporary path, then the old file is deleted and the new file is renamed to **newPath**.
fileSys	File system. If **NULL**, uses the **fileSys** of the document's current backing file. Files can only be saved to the same file system. **fileSys** must be either **NULL** or the default file system obtained with **ASGetDefaultFileSys**, otherwise an error is raised.
progMon	Progress monitor. Use **AVAppGetDocProgressMonitor** to obtain the default. **NULL** may be passed, in which case no progress monitor is used.
progMonClientData	Pointer to user-supplied data to pass to **progMon** each time it is called. Should be **NULL** if **progMon** is **NULL**.

Return Value

None

Exceptions

Among others:

Raises **pdErrAfterSave** if the save was completed successfully, but there were problems cleaning up afterwards. The document is no longer consistent and cannot be changed. It must be closed and reopened.

Raises **pdErrOpNotPermitted** if saving is not permitted. Saving is permitted if either edit or **editNotes** (see **PDPerms**) is allowed, or you are doing a full save and **saveAs** is allowed.

Raises **pdErrAlreadyOpen** if **PDSaveFull** is used, and the file specified by **newPath** is already open.

Notifications

PDDocWillSave
PDDocDidSave

Header File

PDCalls.h

Related Methods

PDDocClose

PDDocSaveWithParams

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDDocSaveWithParams

```
void PDDocSaveWithParams (PDDoc doc,
PDDocSaveParams inParams);
```

Description

Saves a document to disk as specified in a parameter's structure. This is essentially the same as **PDDocSave** with two additional parameters: a cancel proc and cancel proc client data (so you could cut and paste description information, and so on, from **PDDocSave**).

You can replace this method with your own version, using **HFTReplaceEntry**.

Saving a PDDoc invalidates all objects derived from it. See **PDDocSave** for important information about releasing objects that you may have acquired or used from a **PDDoc** before it is saved.

Parameters

doc	The document to save.
inParams	**PDDocSaveParams** structure specifying how the document should be saved.

Return Value

None

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDDocSave

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020002** or higher.

PDDocSetFlags

```
void PDDocSetFlags (PDDoc doc, ASInt32 flags);
```

Description

Sets information about the document's file and its state. This method can only be used to set, not clear, flags. As a result, it is not possible, for example, to use this method to clear the flag that indicates that a document has been modified and needs to be saved. Instead, use **PDDocClearFlags** to clear flags.

Parameters

doc	The document whose flags are set.
flags	A bit field composed of an OR of the **PDDocFlags** values.

Return Value

None

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDDocGetFlags
PDDocClearFlags

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to 0x00020000 or higher.

PDDocSetFullScreen

```
void PDDocSetFullScreen (PDDoc pdDoc, ASBool fs);
```

Description

Sets whether or not this document opens in full-screen mode. This provides an alternative to calling **PDDocSetPageMode** with **PDFullScreen**.

Parameters

pdDoc	The document to set.
fs	**true** if the document is set to open in full-screen mode, **false** otherwise.

Return Value

None

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDDocGetFullScreen

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020002** or higher.

PDDocSetInfo

```
void PDDocSetInfo (PDDoc doc, const char* infoKey,
char* buffer, ASInt32 nBytes);
```

Description

Sets the value of a key in a document's Info dictionary. See Section 8.2 on info dictionaries in the *PDF Reference* for information about Info dictionaries. All values in the Info dictionary should be strings; other data types such as numbers and booleans should not be used as values in the Info dictionary. If an info dictionary key is specified that is not currently in the info dictionary, it is added to the dictionary.

Users may define their own Info dictionary entries. In this case, it is strongly recommended that the key have the developer's prefix assigned by the Adobe Developers Association.

NOTE: For Roman viewers, this text is always stored in the **PDFDocEncoding**. For non-Roman character set viewers, this text is stored as **PDFDocEncoding** or Unicode, depending on the file's creator.

Parameters

doc	The document whose Info dictionary key is set.
infoKey	The name of the Info dictionary key whose value is set.
buffer	Buffer containing the value to associate with **infoKey**.
nBytes	The number of bytes in **buffer**.

Return Value

None

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDDocGetInfo

Availability

Available if **`PI_PDMODEL_VERSION`** (in `PIRequir.h`) is set to **`0x00020000`** or higher.

PDDocSetNewCryptHandler

```
void PDDocSetNewCryptHandler (PDDoc pdDoc,
ASAtom newCryptHandler);
```

Description

Sets specified document's new security handler (that is, the security handler that will be used after the document is saved).

This method simply returns if the new security handler is the same as the old one. Otherwise, the new security handler's **PDCryptNewSecurityDataProc** is called to set the document's **newSecurityData** field. If the new security handler does not have **PDCryptNewSecurityDataProc**, the document's **newSecurityData** field is set to 0.

Parameters

doc	The document whose new security handler is set.
newCryptHandler	The **ASAtom** corresponding to the name of the new security handler to use for the document. This name must be the same as the **pdfName** used when the security handler was registered using **PDRegisterCryptHandler**. Use **ASAtomNull** to remove security from the document.

Return Value

None

Exceptions

Raises **pdErrNoCryptHandler** if there is no security handler registered with the specified name and the name is not **ASAtomNull**.

Raises **pdErrOpNotPermitted** if the document's permissions do not allow its security to be modified.

Notifications

None

Header File

PDCalls.h

Related Methods

PDDocGetNewCryptHandler
PDRegisterCryptHandler

Availability

Available if **`PI_PDMODEL_VERSION`** (in `PIRequir.h`) is set to **`0x00020000`** or higher.

PDDocSetNewSecurityData

```
void PDDocSetNewSecurityData (PDDoc doc, void* secData);
```

Description

Sets the security data structure for the specified document's new security handler. Use **PDDocSetNewCryptHandler** to set a new security handler for a document.

Parameters

doc	The document whose new security data structure is set.
secData	Pointer to the new security data structure to set for **doc**. See **PDDocNewSecurityData** for information on creating and filling this structure.

Return Value

None

Exceptions

Raises **pdErrNeedCryptHandler** if the document does not have a new security handler.

Raises **pdErrOpNotPermitted** if the document's permissions cannot be changed.

Notifications

None

Header File

PDCalls.h

Related Methods

PDDocGetNewSecurityData
PDDocGetSecurityData
PDDocNewSecurityData
PDDocSetNewCryptHandler

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDDocSetOpenAction

```
void PDDocSetOpenAction (PDDoc doc, PDAction action);
```

Description

Sets the value of the **OpenAction** key in the Catalog dictionary, which is the action performed when the document is opened.

Parameters

doc	The document whose open action is set.

Return Value

None

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDDocGetOpenAction

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to 0x00020000 or higher.

PDDocSetPageLabel

```
void PDDocSetPageLabel (PDDoc pdDoc, ASInt32 pageNum,
PDPageLabel pgLabel);
```

Description

Attaches a label to a page. This establishes the numbering scheme for that page and all following it, until the next page with an attached label is encountered. This label allows PDF producers to define a page numbering system other than the Acrobat default.

Parameters

pdDoc	The document containing the page to label.
pageNum	The number of the page to label.
pgLabel	Label for the page specified by pageNum.

Return Value

If pageNum is less than 0 or greater than the number of pages in **pdDoc**, nothing is done.

Exceptions

Raises **genErrBadParm** if **pgLabel** is not a valid **PDPageLabel**.

Notifications

PDDocPageLabelDidChange

Header File

PDCalls.h

Related Methods

PDDocFindPageNumForLabel
PDDocGetPageLabel
PDDocGetLabelForPageNum
PDDocRemovePageLabel

Example

```
PDPageLabel pgLabel;
/* Start page numbering with page 5 */
PDDocSetPageLabel (pdDoc, 5L, pgLabel);
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDDocSetPageMode

```
void PDDocSetPageMode (PDDoc doc, PDPageMode mode);
```

Description

Sets the value of the **PageMode** key in the Catalog dictionary.

Parameters

doc	The document whose page mode is set.
mode	The page mode to set.

Return Value

None

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDDocGetPageMode
AVDocSetViewMode

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDDocSetXAPMetadata

```
void PDDocSetXAPMetadata (PDDoc pdDoc, ASText metadataASText);
```

Description

Sets the XAP metadata associated with a document.

Replaces the XAP metadata associated with the document **pdDoc** with the XAP metadata stored in **metadataASText**.

The contents of **metadataASText** must be well-formed XML and Resource Description Format (RDF) as defined by the W3C (see http://www.w3.org/RDF) that also forms valid XAP. If **metadataASText** is ill-formed, an error is raised.

PDDocSetXAPMetadata will not destroy **metadataASText** or alter its text.

PDDocSetXAPMetadata copies the textual information it needs, so subsequent alteration or destruction of **metadataASText** does not affect the document XAP metadata.

Calling **PDDocSetXAPMetadata** will change the contents of **pdDoc**'s Info dictionary to reflect the values of corresponding metadata properties represented in **metadataASText**.

NOTE: **PDDocSetXAPMetadata** will raise an exception if the user does not have permission to change the document.

NOTE: If you use **PDDocSetXAPMetadata** to set metadata that does not respect the requirement that aliased metadata items (such as **pdf:Title** and **xap:Title**) be equal, then the mechanism that maintains this equality when you set metadata via **PDDocSetInfo** will be disabled.

Parameters

pdDoc	The document whose metadata is to be set.
metadataASText	An **ASText** object containing the metadata to be stored in the document.

Return Value

None

Exceptions

pdMetadataErrBadXAP
pdMetadataErrCouldntCreateMetaXAP
pdErrOpNotPermitted if **pdDoc** isn't writable

Notifications

None

Header File

PDMetadataCalls.h

Related Methods

PDDocGetXAPMetadata
PDDocSetInfo

Availability

Available if **PI_PDMETADATA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDFileSpec

PDFileSpecAcquireASPath

```
ASPathName PDFileSpecAcquireASPath (PDFileSpec fileSpec,
ASPathName relativeToThisPath);
```

Description

Acquires an **ASPathName** for the specified file specification and relative path.

Parameters

fileSpec	The file specification for which an **ASPathName** is acquired.
relativeToThisPath	A pathname relative to which the **fileSpec** is interpreted. If **NULL**, **fileSpec** is assumed to be an absolute, not a relative, path.

Return Value

The **ASPathName** corresponding to **fileSpec**.

After you are done using the **ASPathName**, you must free it using **ASFileSysReleasePath**.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

ASFileSysReleasePath

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDFileSpecFromCosObj

```
PDFileSpec PDFileSpecFromCosObj (CosObj obj);
```

Description

Converts an appropriate string or dictionary Cos object to a file specification. This method does not copy the object, but is instead the logical equivalent of a type cast.

Parameters

obj	The Cos object to convert to a file specification.

Return Value

The file specification corresponding to **obj**.

Exceptions

Raises **pdErrBadFileSpec** if the file specification is not valid, as determined by **PDFileSpecIsValid**.

Notifications

None

Header File

PDCalls.h

Related Methods

PDFileSpecGetCosObj
PDFileSpecIsValid

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDFileSpecGetCosObj

```
CosObj PDFileSpecGetCosObj (PDFileSpec fileSpec);
```

Description

Gets the Cos object associated with a file specification. This method does not copy the object, but is instead the logical equivalent of a type cast.

Parameters

fileSpec	The file specification whose Cos object is obtained.

Return Value

The string or dictionary Cos object corresponding to the file specification.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDFileSpecFromCosObj

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDFileSpecGetDIPath

```
ASInt32 PDFileSpecGetDIPath (PDFileSpec fileSpec,
char* buffer, ASInt32 bufLen);
```

Description

Gets the device-independent pathname from a file specification.

Parameters

fileSpec	The file specification whose device-independent pathname is obtained.
buffer	*(Filled by the method)* null-terminated device-independent pathname. If **buffer** is **NULL**, the method simply returns the length of the pathname.
bufLen	Length of **buffer**, in bytes. If the device-independent pathname is longer than this, only the first **bufLen** – 1 bytes are copied into **buffer**, plus a **NULL** at the end of the buffer.

Return Value

Number of characters (excluding the **NULL**) copied into **buffer**.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

None

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDFileSpecGetDoc

```
PDDoc PDFileSpecGetDoc (PDFileSpec fileSpec);
```

Description

Gets the **PDDoc** that contains **fileSpec**.

Parameters

fileSpec	A **PDFileSpec** in a document.

Return Value

A **PDDoc** or **NULL** if the file specification **CosObj** is not in a document.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

None

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020002** or higher.

PDFileSpecGetFileSys

```
ASFileSys PDFileSpecGetFileSys (PDFileSpec fileSpec);
```

Description

Gets the file system that services the specified file specification.

Parameters

fileSpec	The file specification whose file system is obtained.

Return Value

The file system that services **fileSpec**.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDFileSpecGetFileSysName

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDFileSpecGetFileSysName

```
ASAtom PDFileSpecGetFileSysName (PDFileSpec fileSpec);
```

Description

Gets the name of the file system that a **PDFileSpec** belongs to. For a simple **fileSpec** (string form), the name of the file System is the name of the document's file system—if the **CosObj** that is the **fileSpec** is contained in a document. For a complex **fileSpec** (dict form) with an **/FS** key, the name of the file system is the atom associated with the **FS** key.

The file system returned by **PDFileSpecGetFileSys** is the file system that has registered a **PDFileSpecHandler** for **fileSpec**'s file system NAME (if there is one), and is not necessarily the same as **ASFileGetFileSysByName**(**PDFileSpecGetFileSysName**(**fileSpec**));

Parameters

fileSpec	A **PDFileSpec**.

Return Value

An **ASAtom** representing the file system of **fileSpec**.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDFileSpecGetFileSys

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020002** or higher.

PDFileSpecIsValid

```
ASBool PDFileSpecIsValid (PDFileSpec fileSpec);
```

Description

Tests whether or not a file specification is valid. This is intended only to ensure that the file spec has not been deleted, not to ensure that all necessary information is present and valid.

Parameters

fileSpec	The file specification whose validity is tested.

Return Value

true if **fileSpec** is valid, **false** otherwise.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

None

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDFileSpecNewFromASPath

```
PDFileSpec PDFileSpecNewFromASPath (PDDoc pdDoc,
ASFileSys fileSys, ASPathName path,
ASPathName relativeToThisPath);
```

Description

Creates a new file specification from the specified **ASPathName**, using the **PDFileSpecNewFromASPathProc** of the specified file system's file specification handler.

Parameters

pdDoc	The document in which the new file specification will be used.
fileSys	Pointer to an **ASFileSysRec** specifying the file system responsible for the newly-created file specification.
path	The path to convert into a file specification.
relativeToThisPath	Pathname relative to which **path** is interpreted. If **NULL**, **path** is interpreted as an absolute pathname, not a relative pathname.

Return Value

The newly-created file spec, or an invalid file spec if the **ASPathName** cannot be converted to a **PDFileSpec** (use **PDFileSpecIsValid** to test whether or not the conversion was successful).

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDFileSpecIsValid

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDFont

PDFontAcquireEncodingArray

```
ASUns8** PDFontAcquireEncodingArray (PDFont font);
```

Description

Acquires a font's encoding array (the mapping of character codes to glyphs). When done with this array, call **PDFontEncodingArrayRelease** to release it.

The array contains 256 pointers. If a pointer is not **NULL**, it points to a C string containing the name of the glyph for the code point corresponding to the index. If it is **NULL**, then the name of the glyph is unchanged from that specified by the font's built-in encoding.

For a Type 3 font, all glyph names will be present in the encoding array, and **NULL** entries correspond to un-encoded code points.

For non-Roman character set viewers, it is *not* appropriate to call this method.

Parameters

font	The font whose encoding array is obtained.

Return Value

The font's encoding array. Returns **NULL** if there is no encoding array associated with the font.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDFontEncodingArrayRelease
PDFontGetEncodingIndex

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDFontAcquireXlateTable

```
ASInt16* PDFontAcquireXlateTable (PDFont font);
```

Description

Increments the specified font's **XlateTable** reference count and also returns the **XlateTable**, which is a 256-entry table that maps characters from their encoding in the PDF file to host encoding. If a character cannot be mapped to host encoding, then the table entry will (for that character) contain –1. When you are done using the **XlateTable**, call **PDFontXlateTableRelease** to release it.

For non-Roman character set viewers, it is *not* appropriate to call this method.

Parameters

font	The font whose **XlateTable** is obtained.

Return Value

Pointer to the font's **XlateTable**, if any. Otherwise **NULL**.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDFontXlateTableRelease
PDFontXlateString

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDFontEncodingArrayRelease

```
void PDFontEncodingArrayRelease (ASUns8** array);
```

Description

Releases a font's encoding array (the mapping of character codes to glyphs). Call this method after you are done using an encoding array acquired using **PDFontAcquireEncodingArray**.

Parameters

array	The encoding array to release.

Return Value

None

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDFontAcquireEncodingArray

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDFontEnumCharProcs

```
void PDFontEnumCharProcs (PDFont font,
PDCharProcEnumProc proc, void* clientData);
```

Description

Enumerates a Type 3 font's character drawing procedures. The elements of a single character procedure can be enumerated using **PDCharProcEnum**.

Parameters

font	The Type 3 font's character drawing procedures are being enumerated.
proc	User-supplied callback to call for each character in the font. Enumeration ends if **proc** returns **false**. If the font contains no characters, **proc** will not be called.
clientData	Pointer to user-supplied data passed to **proc** each time it is called.

Return Value

None

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDCharProcEnum
PDDocEnumFonts
PDDocEnumLoadedFonts

Example

```
ACCB1 ASBool ACCB2 myPDCharProcEnumProc(
     char* name, PDCharProc obj,
     void* clientData)
{
     ...
}
PDFontEnumCharProcs(font,
     ASCallbackCreateProto(
     PDCharProcEnumProc,
     myPDCharProcEnumProc), NULL);
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDFontFromCosObj

```
PDFont PDFontFromCosObj (CosObj fontObj);
```

Description

Converts a dictionary Cos object to a font. This method does not copy the object, but is instead the logical equivalent of a type cast.

Parameters

fontObj	Dictionary Cos object for the font.

Return Value

The **PDFont** for **fontObj.** Returns **NULL** if there is no **CosDoc** or **PDDoc** containing **fontObj.**

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

None

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDFontGetBBox

```
void PDFontGetBBox (PDFont font, ASFixedRect* bboxP);
```

Description

Gets a Type 3 font's bounding box, which is the smallest rectangle that would enclose every character in the font if they were overlaid and painted.

Parameters

font	The font whose bounding box is obtained.
bboxP	*(Filled by the method)* Pointer to a rectangle specifying the font's bounding box.

Return Value

None

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

None

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDFontGetCharSet

```
PDCharSet PDFontGetCharSet (PDFont font);
```

Description

Gets the font's character set. This is derived from the "Uses Adobe standard encoding" bit in the font descriptor (if the font has a font descriptor) or from the font's name (if the font is one of the base 14 fonts and does not have a font descriptor).

For non-Roman character set viewers, call **PDFontGetEncodingName** instead.

Parameters

font	The font whose character set is obtained.

Return Value

The font's character set. For non-Roman character set viewers, returns **PDUnknownCharSet**.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDFontGetEncodingName

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDFontGetCIDSystemInfo

```
ASAtom PDFontGetCIDSystemInfo (PDFont font);
```

Description

Gets an **ASAtom** representing Registry and Ordering for a CIDFont. This information resides in the **CIDSystemInfo** entry of the CIDFont dictionary, which describes a CIDFont.

PDFontGetCIDSystemInfo takes either a Type 0 font or descendant font (CIDType0 or CIDType2) as an argument. This information is always present for any Type 0 font; the actual registry ordering information is a part of the descendant font.

This method provides one way to identify a font's language.

The **CIDSystemInfo** entry uses three components to identify a character collection uniquely:

- A registry name to identify an issuer of ordering information.
- An ordering name to identify an ordered character collection.
- A supplement number to indicate that the ordered character collection for a registry, ordering, and previous supplement has been changed to add new characters assigned CIDs beginning with the next available CID.

The **PDFontGetCIDSystemInfo** method obtains the first two of these components.

A CIDFont is designed to contain a large number of glyph procedures. Instead of being accessed by a name, each glyph procedure is accessed by an integer known as a character identifier or CID. Instead of a font encoding, CIDFonts use a CMap with a Type 0 composite font to define the mapping from character codes to a font number and a character selector.

For more information on Type 0 fonts, CIDFonts, and CMaps, see Section 5.6 in the *PDF Reference*. For detailed information on CIDFonts, see Technical Note #5092, *CID-Keyed Font Technology Overview*, and Technical Note #5014, *Adobe CMap and CIDFont Files Specification*.

Parameters

font	The font whose Registry and Ordering information is obtained.

Return Value

The **ASAtom** representing the CIDFont's Registry and Ordering information, for example, "Adobe-Japan1."

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDFontGetCIDSystemSupplement
PDFontGetDescendant

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020003** or higher.

PDFontGetCIDSystemSupplement

```
ASInt32 PDFontGetCIDSystemSupplement (PDFont font);
```

Description

Gets the SystemSupplement number of a CIDFont. This field resides in the **CIDSystemInfo** entry of the CIDFont dictionary, which describes a CIDFont.

The **CIDSystemInfo** entry uses three components to identify a character collection uniquely:

- A registry name to identify an issuer of orderings.
- An ordering name to identify an ordered character collection.
- A supplement number to indicate that the ordered character collection for a registry, ordering, and previous supplement has been changed to add new characters assigned CIDs beginning with the next available CID.

PDFontGetCIDSystemInfo provides character collection information, and **PDFontGetCIDSystemSupplement** specifies the version of the ordering.

A CIDFont is designed to contain a large number of glyph procedures. Instead of being accessed by a name, each glyph procedure is accessed by an integer known as a character identifier or CID. Instead of a font encoding, CIDFonts use a CMap with a Type 0 composite font to define the mapping from character codes to a font number and a character selector.

For more information on Type 0 fonts, CIDFonts, and CMaps, see Section 5.6 in the *PDF Reference*. For detailed information on CIDFonts, see Technical Note #5092, *CID-Keyed Font Technology Overview*, and Technical Note #5014, *Adobe CMap and CIDFont Files Specification*.

Parameters

font	The font whose SystemSupplement field is obtained.

Return Value

The SystemSupplement field from the CIDFont.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDFontGetDescendant
PDFontGetCIDSystemInfo

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020003** or higher.

PDFontGetCosObj

```
CosObj PDFontGetCosObj (PDFont font);
```

Description

Gets the Cos object for a font. This method does not copy the object, but is instead the logical equivalent of a type cast.

Parameters

font	The font whose Cos object is obtained.

Return Value

The dictionary Cos object for the font. The dictionary's contents may be enumerated with **CosObjEnum**.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDDocEnumFonts

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDFontGetDescendant

```
PDFont PDFontGetDescendant (PDFont font);
```

Description

Gets a Type 0 font's descendant, which may be a CIDType0 or CIDType2 font.

Type 0 fonts support single-byte or multi-byte encodings and can refer to one or more *descendant fonts*. These fonts are analogous to the Type 0 or composite fonts supported by Level 2 PostScript interpreters. However, PDF Type 0 fonts only support character encodings defined by a CMap. The CMap specifies the mappings between character codes and the glyphs in the descendant fonts.

For information on Type 0 fonts, see Section 5.6 in the *PDF Reference*. See Section 5.6.4 for more details on CMaps.

Parameters

font	The font whose descendant is obtained.

Return Value

The font's descendant font.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDFontGetCIDSystemInfo
PDFontGetCIDSystemSupplement

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020003** or higher.

PDFontGetEncodingIndex

```
ASInt32 PDFontGetEncodingIndex (PDFont font);
```

Description

Gets a font's encoding index.

For non-Roman character set viewers, it is *not* appropriate to call this method. Call **PDFontGetEncodingName** instead.

Parameters

font	The font whose encoding index is obtained.

Return Value

A font encoding index. If the index is greater than **PDLastKnownEncoding**, it is a custom encoding, and is unique within the document. If the index is less than **PDLastKnownEncoding**, it must be one of the **PDFontEncoding** values.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDFontAcquireEncodingArray

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDFontGetEncodingName

```
const ASUns8* PDFontGetEncodingName (PDFont font);
```

Description

Gets a string representing a font's encoding.

Use **PDFontGetEncodingIndex** to get encoding information for Roman viewers. In Roman systems, a font encoding describes a font's character encoding—the mapping between numeric character codes and character names. It may be MacRomanEncoding in Mac OS, WinAnsiEncoding in Windows, ISO8859-1 (ISO Latin-1) in UNIX, or some other encoding, such as SHIFT-JIS on Japanese systems. See Section 5.5.5 in the *PDF Reference* for information on font encodings. See Appendix D in the *PDF Reference* for descriptions of MacRomanEncoding and WinAnsiEncoding.

For non-Roman systems, the font encoding may be a variety of encodings, which are defined by a CMap (character map). See Section 5.14 in the *PDF Reference* for predefined CMaps. In this case, the encoding string contains values such as "90ms-RKSJ-H", "90msp-RKSJ-H", "Identity-V", or "90pv-RKSJ-H"; it doesn't return a string like "Shift-JIS".

Parameters

font	The font whose encoding name is obtained.

Return Value

String representing the font's encoding.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDFontGetEncodingIndex
PDGetHostEncoding

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020003** or higher.

PDFontGetFontMatrix

```
void PDFontGetFontMatrix (PDFont fontP,
ASFixedMatrix* matrixP);
```

Description

Gets a font's matrix, which specifies the transformation from character space to text space. See Section 5.5.4 in the *PDF Reference*. This is only valid for Type 3 fonts.

Parameters

font	The font whose matrix is obtained.
matrixP	*(Filled by the method)* Pointer to the font's matrix.

Return Value

None

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDDocEnumFonts

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDFontGetMetrics

```
void PDFontGetMetrics (PDFont font, PDFontMetricsP metricsP,
os_size_t sizeMetrics);
```

Description

Gets a font's metrics, which provide the information needed to create a substitute multiple master font when the original font is unavailable. See Section 5.7 in the *PDF Reference* for a discussion of font descriptors.

Parameters

font	The font whose metrics are being obtained.
metricsP	*(Filled by the method)* Pointer to a **PDFontMetrics** structure containing the font's metrics. The font metric values may be patched before being returned. If the actual values in the PDF file are required, use Cos instead to get trustworthy metrics.
sizeMetrics	Must be **sizeof(PDFontMetrics)**.

Return Value

None

Notifications

None

Exceptions

None

Header File

PDCalls.h

Related Methods

PDFontGetWidths
PDFontSetMetrics

Example

```
PDWordFinder wObj;
PDWord pdWord;
PDStyle style;
PDFont font;
PDFontMetrics fMetrics;

/* Get font metric info */
style = PDWordGetNthCharStyle(wObj, pdWord, 0 );
font = PDStyleGetFont(style);
PDFontGetMetrics (font, &fMetrics, sizeof(PDFontMetrics));
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDFontGetName

```
ASInt32 PDFontGetName (PDFont font, char* buffer,
ASInt32 bufSize);
```

Description

Gets the name of a font. The behavior depends on the font type; for a Type 3 font it gets the value of the **Name** key in a PDF Font resource. See Section 5.5.4 in the *PDF Reference*. For other types it gets the value of the **BaseFont** key in a PDF font resource.

Parameters

font	The font whose name is obtained.
buffer	*(Filled by the method)* Buffer into which the font's name is stored. The client may pass in **NULL** to obtain the buffer size, then call the method with a buffer of the appropriate size.
bufSize	Length of **buffer**, in bytes. The maximum font name length that the Acrobat viewer will return is **PSNAMESIZE** (see PDExpT.h).

Return Value

The number of characters in the font name. If the font name is too long to fit into **buffer**, **bufSize** - 1 bytes are copied into **buffer**, and **buffer** is null-terminated.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDDocEnumFonts
PDFontGetEncodingName

Example

```
PDWord pdWord;
PDFont font;
PDStyle style = PDWordGetNthCharStyle(pdWF,
     pdWord, 0);
size = PDStyleGetFontSize(style);
PDFontGetName(font, mbuf, sizeof(mbuf));
if(size == fixedTen && !strstr(mbuf,
     "Italic"))
{
     /* process the 10 pt. Italic */
     ...
}
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to 0x00020000 or higher.

PDFontGetSubtype

```
ASAtom PDFontGetSubtype (PDFont font);
```

Description

Gets a font's subtype.

Parameters

font	The font whose subtype is obtained.

Return Value

subtype

The font's subtype. The **ASAtom** returned can be converted to a string using **ASAtomGetString**.

Must be one of the **Font Subtypes**.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDDocEnumFonts

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDFontGetWidths

```
void PDFontGetWidths (PDFont font, ASInt16* widths);
```

Description

Gets the advance width of every glyph in a font. The advance width is the amount by which the current point advances when the glyph is drawn. The advance width may not correspond to the visible width of the glyph (for example, a glyph representing an accent mark might have an advance width of zero so that characters can be drawn under it). For this reason, the advance width cannot be used to determine the glyphs' bounding boxes.

For non-Roman character set viewers, this method gets the width for a single byte range (0 through 255).

Parameters

font	The font whose glyph advance widths are obtained.
widths	*(Filled by the method)* An array of glyph advance widths, measured in character space units. Un-encoded code points will have a width of zero. For non-Roman character set viewers, an array for a single byte range (0 through 255).

Return Value

None

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDFontGetMetrics
PDFontSetMetrics
PDFontXlateWidths

Example

```
PDWordFinder wObj;
PDWord pdWord;
PDStyle style;
PDFont font;
PDFontMetrics fMetrics;
ASInt16 widths[256];

/* Get font width info */
style = PDWordGetNthCharStyle(wObj, pdWord, 0);
font = PDStyleGetFont(style);
PDFontGetWidths(font, widths);
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDFontIsEmbedded

```
ASBool PDFontIsEmbedded (PDFont font);
```

Description

Tests whether or not the specified font is embedded in the PDF file (that is, the font is stored as a font file, which is a stream embedded in the PDF file). Only Type 1 and TrueType fonts can be embedded.

Parameters

font	The font to test.

Return Value

true if the font is embedded in the file, **false** otherwise.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDDocEnumFonts

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDFontSetMetrics

```
void PDFontSetMetrics (PDFont font, PDFontMetricsP metricsP,
os_size_t sizeMetrics);
```

Description

Sets a font's metrics, which provide the information needed to create a substitute multiple master font when the original font is unavailable. See Section 5.7 in the *PDF Reference* for a discussion of font descriptors. This method can only be used on Type 1, multiple master Type 1, and TrueType fonts; it cannot be used on Type 3 fonts.

Parameters

font	The font whose metrics are being set.
metricsP	Pointer to a **PDFontMetrics** structure containing the font's metrics.
sizeMetrics	Must be **sizeof(PDFontMetrics)**.

Return Value

None

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDFontGetMetrics

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDFontXlateString

```
ASBool PDFontXlateString (PDFont font, ASUns8* inP,
ASUns8* outP, ASInt32 len);
```

Description

Translates a string from the **PDFont**'s encoding into host encoding. If any characters cannot be represented in host encoding, they are replaced with space characters. If no **XlateTable** exists in the font, the function returns **false** and **outP** is not written.

For non-Roman character set viewers, it is *not* appropriate to call this method. Instead call one of the following: **PDFontXlateToHost**, **PDFontXlateToUCS**, **PDXlateToHostEx**, or **PDXlateToPDFDocEncEx**.

Parameters

font	The font (and hence, encoding) that **inP** uses.
inP	The string to translate.
outP	*(Filled by the method)* The translated string. **outP** may point to the same buffer as **inP**, to allow in-place translation.
len	The length of **inP** and **outP**.

Return Value

true if an **XlateTable** exists in the font, **false** otherwise. If no **XlateTable** exists in the font, **outP** is not written.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDFontXlateToHost
PDFontAcquireXlateTable
PDFontXlateToUCS
PDXlateToHostEx
PDXlateToPDFDocEncEx

Availability

Available if **`PI_PDMODEL_VERSION`** (in `PIRequir.h`) is set to **`0x00020000`** or higher.

PDFontXlateTableRelease

```
void PDFontXlateTableRelease (ASInt16* table);
```

Description

Decrements the specified font's **XlateTable** reference count. The **XlateTable** is a 256-entry table that maps characters from their encoding in the PDF file to host encoding. If a character cannot be mapped to host encoding, then the table entry will (for that character) contain –1.

Parameters

table	The **XlateTable** to release.

Return Value

None

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDFontAcquireXlateTable
PDFontXlateString

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDFontXlateToHost

```
ASInt32 PDFontXlateToHost (PDFont fontP, ASUns8* inP,
ASInt32 inLen, ASUns8* outP, ASInt32 outLen);
```

Description

Translates a string from the **PDFont**'s encoding to host encoding. This is useful for converting the text from a **PDWord** into host encoding. In the same way that **PDXlateToHostEx** converts text from bookmark titles to host encoding, **PDFontXlateToHost** converts text from a page contents stream to host encoding. Use **PDFontXlateToUCS** to translate from the **PDFont**'s encoding to Unicode.

Non-Roman fonts, such as PostScript composite fonts, can be encoded in different ways, such as SHIFT-JIS, RKSJ, and so on. To use **PDFontXlateToHost**, the caller doesn't need to know which encoding they're converting from, since that information is contained in the **PDFont**.

Host encoding is a platform-dependent encoding for the host machine. For non-UNIX Roman systems, it is MacRomanEncoding in Mac OS and WinAnsiEncoding in Windows. In UNIX (except HP-UX) Roman systems, it is ISO8859-1 (ISO Latin-1); for HP-UX, it is HP-ROMAN8. See Appendix D in the *PDF Reference* for descriptions of MacRomanEncoding and WinAnsiEncoding. For non-Roman systems, the host encoding may be a variety of encodings, which are defined by a CMap (character map). See Table 5.14 in the *PDF Reference* for a list of predefined CMaps. Use **PDGetHostEncoding** to determine if a system's host encoding is Roman or not.

Parameters

fontP	The font used in the input string **inP**.
inP	Pointer to the string to translate.
inLen	Length of the **inP** buffer, in bytes.
outP	*(Filled by the method)* Pointer to the translated string.
outLen	The length of the **outP** buffer, in bytes.

Return Value

Number of bytes in the translated string **outP**.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDFontXlateString
PDFontXlateToUCS
PDGetHostEncoding
PDXlateToHostEx
PDXlateToPDFDocEncEx

Example

```
ASInt16 newlen;
ASUns8 stackBuffer[1024];
ASUns8* buffer = stackBuffer;

newlen = PDFontXlateToHost(font, string, stringlen, buffer,
sizeof(stackBuffer) - 1);

if (newlen == sizeof(stackBuffer) - 1) {
     newlen = PDFontXlateToHost(font, string,
            stringlen, NULL, 0);
      buffer = ASmalloc(newlen + 1);
      newlen = PDFontXlateToHost(font, string,
            stringlen, buffer, newlen);
     }

buffer[newlen] = '\0';
...
if (buffer != stackBuffer)
     ASfree(buffer);
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020003** or higher.

PDFontXlateToUCS

```
ASInt32 PDFontXlateToUCS (PDFont fontP, ASUns8* inP,
ASInt32 inLen, ASUns8* outP, ASInt32 outLen);
```

Description

Translates a string from whatever encoding the **PDFont** uses to Unicode encoding. This is useful for converting the text from a **PDWord** into Unicode. Use **PDFontXlateToHost** to translate from the **PDFont**'s encoding to host encoding.

Non-Roman fonts, like PostScript composite fonts, can be encoded in different ways, such as SHIFT-JIS, RKSJ, and so on. The caller doesn't need to know which encoding they're converting from, since that information is contained in the **PDFont**.

For Roman systems, a font encoding describes a font's character encoding—the mapping between numeric character codes and character names. It may be MacRomanEncoding in Mac OS, ISO8859-1 (ISO Latin-1 on UNIX systems, WinAnsiEncoding in Windows, or some other encoding. See Section 5.5.5 in the *PDF Reference* for information on font encodings. See Appendix D in the *PDF Reference* for descriptions of MacRomanEncoding and WinAnsiEncoding.

For non-Roman systems, the font encoding may be a variety of encodings, which are defined by a CMap (character map). See Table 5.14 in the *PDF Reference* for predefined CMaps.

Parameters

fontP	The font of the input string **inP**.
inP	Pointer to the string to translate.
inLen	Length of the **inP** buffer, in bytes.
outP	*(Filled by the method)* Pointer to the translated string. If **NULL**, the method returns the size of the translated string.
outLen	The length of the **outP** buffer, in bytes. If 0, the method returns the size of the translated string.

Return Value

Number of bytes in the translated string in **outP**.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDFontXlateToHost
PDGetHostEncoding
PDXlateToHostEx
PDXlateToPDFDocEncEx

Example

```
ASInt32 newlen;
ASUns8 stackBuffer[1024];
ASUns8* buffer = stackBuffer;

newlen = PDFontXlateToUCS(font, string, stringlen, buffer,
sizeof(stackBuffer) - 2);

if (newlen == sizeof(stackBuffer) - 2) {
     newlen = PDFontXlateToUCS(font, string,
            stringlen, NULL, 0);
      buffer = ASmalloc(newlen + 2);
      newlen = PDFontXlateToUCS(font, string,
            stringlen, buffer, newlen);
     }

buffer[newlen] = '\0';
buffer[newlen+1] = '\0';
...
if (buffer != stackBuffer)
     ASfree(buffer);
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020003** or higher.

PDFontXlateWidths

```
void PDFontXlateWidths (PDFont font, ASInt16* inP,
ASInt16* outP);
```

Description

Translates an array of 256 glyph advance widths (obtained from **PDFontGetWidths**) from their order in the PDF file into host encoding order. If the widths are already in host encoding order, the widths are merely copied. All un-encoded code points are given a width of zero.

For non-Roman character set viewers, it is *not* appropriate to call this method.

Parameters

font	The font whose glyph widths are translated.
inP	Array of glyph advance widths to rearrange.
outP	*(Filled by the method)* Rearranged array of glyph advance widths.

Return Value

None

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDFontGetWidths

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to 0x00020000 or higher.

PDForm

PDFormEnumPaintProc

```
void PDFormEnumPaintProc (PDXObject obj,
PDGraphicEnumMonitor mon, void* clientData);
```

Description

Enumerates a form's drawing operations.

Parameters

obj	The form whose drawing operations are enumerated.
mon	Structure containing user-supplied callbacks that are called for each drawing operator on a page. Enumeration ends if any procedure returns **false**.
clientData	Pointer to user-supplied data to pass to **mon** each time it is called.

Return Value

None

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDFormEnumResources

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDFormEnumResources

```
void PDFormEnumResources (PDXObject obj,
PDResourceEnumMonitor mon, void* clientData);
```

Description

Enumerates the resources used by a form.

Parameters

obj	The form whose resources are enumerated.
mon	Structure containing user-supplied callbacks that are called for each of the form's resources. Enumeration ends if any procedure returns **false**.
clientData	Pointer to user-supplied data to pass to **mon** each time it is called.

Return Value

None

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDFormEnumPaintProc

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDFormGetBBox

```
void PDFormGetBBox (PDXObject obj, ASFixedRect* bboxP);
```

Description

Gets a form's bounding box.

Parameters

obj	The form whose bounding box is obtained.
bboxP	*(Filled by the method)* Pointer to a rectangle containing the form's bounding box, specified in user space coordinates.

Return Value

None

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

None

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDFormGetFormType

```
ASInt32 PDFormGetFormType (PDXObject obj);
```

Description

Gets the value of a form's **FormType** attribute.

Parameters

obj	Form whose type is obtained.

Return Value

Form type (value of the PDF **FormType** key). This value is 1 for PDF 1.0, 1.1, and 1.2.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

None

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDFormGetMatrix

```
void PDFormGetMatrix (PDXObject obj, ASFixedMatrix* matrixP);
```

Description

Gets the specified form's transformation matrix.

Parameters

obj	The form whose transformation matrix is obtained.
matrix P	*(Filled by the method)* Pointer to a matrix containing the form's transformation matrix, which specifies the transformation from form space to user space. See Section 4.9 in the *PDF Reference*.

Return Value

None

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

None

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDFormGetXUIDCosObj

```
CosObj PDFormGetXUIDCosObj (PDXObject obj);
```

Description

Gets the array Cos object corresponding to a form's **XUID**. An **XUID** is an array of numbers that uniquely identify the form in order to allow it to be cached.

Parameters

obj	The form whose **XUID** is obtained.

Return Value

The array **Cos** object for the form's XUID.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

None

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDGraphic

PDGraphicGetBBox

```
void PDGraphicGetBBox (PDGraphic obj, ASFixedRect* bboxP);
```

Description

Gets a bounding box for the specified graphic object.

Parameters

obj	The graphic object whose bounding box is obtained.
bboxP	*(Filled by the method)* If called during **PDFormEnumPaintProc** or **PDCharProcEnum**, the coordinates are specified in the object space (that is, relative to the object's matrix).

Return Value

None

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDCharProcEnum
PDFormEnumPaintProc

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDGraphicGetCurrentMatrix

```
void PDGraphicGetCurrentMatrix (PDGraphic obj,
ASFixedMatrix* matrix);
```

Description

Gets the current transformation matrix in effect for a graphic object; the matrix is relative to user space.

Parameters

obj	The graphic object for which transformation matrix is obtained.
matrix	*(Filled by the method)* Pointer to a matrix containing the transformation matrix for **obj**.

Return Value

None

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

None

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDGraphicGetState

```
void PDGraphicGetState (PDGraphic obj, PDGraphicStateP stateP,
ASInt32 stateLen);
```

Description

Gets the graphics state associated with a graphic object. See Section 4.3 in the *PDF Reference* for a discussion of the graphics state parameters.

Parameters

obj	The graphic object whose graphics state is obtained.
stateP	*(Filled by the method)* Pointer to a **PDGraphicState** structure containing the graphics state.
stateLen	Must be **sizeof(PDGraphicsState)**.

Return Value

None

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

None

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDImage

PDImageColorSpaceGetIndexLookup

```
void PDImageColorSpaceGetIndexLookup (PDXObject obj,
ASUns8* data, ASInt32 dataLen);
```

Description

Gets the lookup table for an indexed color space. The table will contain the number of entries specified by the index size, and there will be 1 byte for each color component for each entry. The number of color components depends on the color space: gray→1, RGB→3, CMYK→4, Lab→3. For additional information on indexed color space, see Section 4.5.5 in the *PDF Reference*. There is also some useful discussion in the *PostScript Language Reference Manual*, *Third Edition*, under indexed color spaces.

Parameters

obj	The image whose lookup table is obtained.
data	*(Filled by the method)* Array for returned color space information.
dataLen	Length of **data**, in bytes.

Return Value

None

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDInlineImageColorSpaceGetIndexLookup

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDImageGetAttrs

```
void PDImageGetAttrs (PDXObject obj, PDImageAttrsP attrsP,
ASInt32 attrsLen);
```

Description

Gets the attributes of an image (for example, Type, Subtype, Name, Width, Height, BitsPerComponent, ColorSpace, Decode, Interpolate, ImageMask).

Parameters

obj	The image whose attributes are obtained.
attrsP	*(Filled by the method)* Pointer to a **PDImageAttrs** structure containing the image attributes.
attrsLen	Must be **sizeof(PDImageAttrs)**.

Return Value

None

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDInlineImageGetAttrs

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDImageSelectAlternate

```
CosObj PDImageSelectAlternate (CosObj image, ASBool print,
ASUns32 tickLimit, ASBool* cacheImageP, void* callData);
```

Description

Selects which Alternate image to use. This method can do one of three things:

- Return an existing Alternate
- Create an image XObject and return that
- Indicate that this XObject should be skipped

This method is called each time the Acrobat viewer draws an XObject image, regardless of whether or not the image XObject has an Alternates key.

You can replace this method with your own version, using **HFTReplaceEntry**.

Parameters

image	The Cos object for this image XObject's base image. Under some circumstances, **PDImageSelectAlternate** can be called with an **XObject** type other than an image; for example, a form. Because of this, your code *must* check the **XObject**'s subtype (you can use **CosDictGet** to read the value of the **XObject**'s "Subtype" key). If the subtype is not "Image", your code must not modify the **XObject**, but simply return the **CosObj** that was passed to you.
print	**true** if printing, **false** if displaying.
tickLimit	Amount of time, in ticks, before the image selector must return control to the Acrobat viewer. This parameter is not relevant for image selectors that simply choose an existing alternate or create a new image XObject using Cos methods, but it is relevant for image selectors that create a new image XObject by calculating or reading data from a network or a slow device.
If **tickLimit** is zero, the image selector must not return control to the Acrobat viewer until the selector can provide the alternate image to use.	If **tickLimit** is nonzero, the image selector does not have to provide the image XObject within **tickLimit**, but it must raise the **fileErrBytesNotReady** exception if it cannot. This returns control to the Acrobat viewer and informs it that the data is not ready. The Acrobat viewer then calls the image selector periodically until the image selector returns the selected image XObject.

cacheImageP	If **true,** the image data returned to the Acrobat viewer is cached for future use. If **false**, it is not. Pass **true** if you expect your image data to remain valid for at least several calls to your plug-in. Pass **false** if you expect your image data to change on the next call to your plug-in. If you create and return a Cos stream object with an external file system and the stream's data will not always be the same, you must set **cacheImageP** to **false**. If you fail to do this, the Acrobat viewer may use cached image data when it should not.
callData	An opaque pointer containing data that must be passed in other image selector calls.

Return Value

The image XObject to use. Returning a **NULL** Cos object (obtained using **CosNewNull**) tells the Acrobat viewer to skip this XObject entirely.

Exceptions

fileErrBytesNotReady

Notifications

None

Header File

PDCalls.h

Related Methods

PDImageSelGetGeoAttr
PDImageSelGetDeviceAttr
PDImageSelAdjustMatrix

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDImageSelAdjustMatrix

```
void PDImageSelAdjustMatrix (void* callData,
ASFixedMatrix newUserMatrix);
```

Description

Allows an image selector plug-in to change the region of the page occupied by an image. It must only be used by image selector plug-ins that return data for *only the visible part* of an image—to set the region of the page that the sub-image occupies. It must not be used otherwise.

This method only has an effect while displaying on screen. It does nothing when printing.

The matrix set by this call remains in effect only for the current image. The Acrobat viewer automatically replaces it after the image has been drawn.

Parameters

callData	The value passed to the image selector as a parameter to **PDImageSelectAlternate**.
newUserMatrix	The matrix that will replace the **imageToUserMatrix** (see **PDImageSelGetGeoAttr**). The **imageToDevMatrix** is automatically calculated from **newUserMatrix**.

Return Value

None

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDImageSelGetGeoAttr
PDImageSelGetDeviceAttr
PDImageSelectAlternate

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDImageSelGetDeviceAttr

```
void PDImageSelGetDeviceAttr (void* callData,
PDColorSpace* colorSpaceP, ASUns32* bitsPerPixelP,
ASAtom* deviceTypeP);
```

Description

Gets device-related attributes for a particular image XObject. It must only be used from within an image selector plug-in, since it returns information that is only valid in that context. This method can be used by an image selector plug-in to obtain additional information to help the selector determine which alternate image to choose.

If an image is displayed on two devices simultaneously (for example, if the window containing the image is split across two monitors in a multi-monitor system), the values returned for **colorSpaceP** and **bitsPerPixelP** are each the maximum for the devices on which the image is currently displayed. For example, if the image is currently split across the following devices—

- 8-bit gray scale monitor
- 4-bit RGB color monitor

colorSpaceP would be **DeviceRGB**, because that is the “highest” colorspace on which the image is currently displayed.

bitsPerPixelP would be 8, because that is the highest bit depth on which the image is currently displayed.

Parameters

callData	*(Filled by the method)* The value passed to the image selector as a parameter to **PDImageSelectAlternate**.
colorSpaceP	*(Filled by the method)* Destination device’s colorspace. Will be one of the following: **PDDeviceGray** — Grayscale device **PDDeviceRGB** — RGB device **PDDeviceCMYK** — CMYK device If the device has some other color space or its color space cannot be determined, **PDDeviceRGB** is returned.
bitsPerPixelP	*(Filled by the method)* Number of bits used for each pixel. For example, a device with 8 bits red, 8 bits green, and 8 bits blue would have a **bitsPerPixel** of 24. If **bitsPerPixelP** has a value of 0 (instead of the more standard 1, 8, or 24), the number of bits per pixel on the output device could not be determined.

deviceTypeP	*(Filled by the method)* Output device type. Will be one of the following: **`Display`** — A display device such as a monitor **`PostScript`** — A PostScript printer or PostScript file **`nonPostScriptPrinter`** — a non-PostScript printer

Return Value

None

Header File

`PDCalls.h`

Related Methods

`PDImageSelAdjustMatrix`
`PDImageSelGetDeviceAttr`
`PDImageSelectAlternate`

Availability

Available if **`PI_PDMODEL_VERSION`** (in `PIRequir.h`) is set to **`0x00040000`** or higher.

PDImageSelGetGeoAttr

```
void PDImageSelGetGeoAttr (void* callData,
ASFixedRect* updateBBoxP,
ASFixedMatrix* imageToDefaultMatrixP,
ASFixedMatrix* imageToDevMatrixP);
```

Description

Requests geometry-related attributes of an image **XObject**. This method can be used by an image selector plug-in to obtain additional information to help the selector determine which alternate image to choose.

Parameters

callData	*(Filled by the method)* The value passed to the image selector as a parameter to **PDImageSelectAlternate**.
updateBBoxP	*(Filled by the method)* Rectangle bounding the region of the page to update. This is the intersection of the visible portion of the page, any update regions, and any clipping paths that have been explicitly set in the PDF file. Its coordinates are specified in default user space.
imageToDefaultMatrix	*(Filled by the method)* Matrix specifying the transformation from image space (the space in which all images are 1x1 units) to default user space (the space with 72 units per inch). It contains sufficient information for the image selector plug-in to determine the image's size and location on the page. For a "normal page and image" (an "upright" image on a non-rotated page), the following is true: **imageToDefaultMatrixP**–>**a** = image horizontal size in 1/72 of an inch units **imageToDefaultMatrixP**–>**b** = 0 **imageToDefaultMatrixP**–>**c** = 0 **imageToDefaultMatrixP**–>**d** = image vertical size in 1/72 of an inch units **imageToDefaultMatrixP**–>**h** = left edge of image **imageToDefaultMatrixP**–>**v** = bottom edge of image

	In other words, this matrix provides the image's height, width, and position on the page, all in units of points (compare to **imageToDefaultMatrixP**). The intersection of the rectangle obtained by transforming a 1x1 unit rectangle (the image) through **imageToDeviceMatrixP** and the **updateBBoxP** rectangle is the region of the image that is actually drawn. This is the region of the image for which data is required.
imageToDevMatrixP	*(Filled by the method)* Matrix specifying the transformation from image space (the space in which all images are 1x1 unit) to device space (the space in which one unit is one pixel). This matrix provides the image's height, width, and position on the page, all in pixels (compare to **imageToDefaultMatrixP**).

Return Value

None

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDImageSelAdjustMatrix
PDImageSelGetDeviceAttr
PDImageSelectAlternate

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDInlineImage

PDInlineImageColorSpaceGetIndexLookup

```
void PDInlineImageColorSpaceGetIndexLookup
(PDInlineImage image, ASUns8* data, ASInt32 dataLen);
```

Description

Gets the lookup table for an indexed color space. The table will contain the number of entries specified by the index size, and there will be 1 byte for each color component for each entry. The number of color components depends on the color space: gray→1, RGB→3, CMYK→4, Lab→3. For additional information on indexed color space, see Section 4.5.5 in the *PDF Reference*. There is also some useful discussion in the *PostScript Language Reference Manual, Third Edition* under indexed color spaces.

Parameters

image	The inline image whose lookup table is obtained.
data	*(Filled by the method)* The lookup table for **image**.
dataLen	Length of **data**, in bytes.

Return Value

None

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDImageColorSpaceGetIndexLookup

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDInlineImageGetAttrs

```
void PDInlineImageGetAttrs (PDInlineImage obj,
PDImageAttrsP attrsP, ASInt32 attrsLen);
```

Description

Gets an inline image's attributes.

NOTE: This method is provided only for backwards compatibility. It has not been updated beyond PDF Version 1.1 and may not work correctly for newly created PDF 1.2 or later files. You should use the PDFEdit API to enumerate page contents.

NOTE: The attribute for a color space is a **CosObj**. Cos objects that are the result of parsing inline dictionaries in the PDF page contents are a special class of Cos objects. You should never depend on these objects lasting the lifetime of the document. You should extract the information you need from the object immediately and refer to it no further in your code.

Parameters

obj	The inline image whose attributes are obtained.
attrsP	*(Filled by the method)* Pointer to a **PDImageAttrs** structure containing the image attributes. NOTE: This structure contains a Cos object that is subject to the warning above.
attrsLen	Must be **sizeof(PDImageAttrs)**.

Return Value

None

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDImageGetAttrs
PDInlineImageGetData

Example

```
PDImageAttrs iattrs;
     ASUns8* bitsData;

     PDInlineImageGetAttrs(obj,&iattrs,
  sizeof(PDImageAttrs));

     if(NULL == (bitsData =
  (ASUns8 *)ASmalloc(iattrs.dataLen)) ){
           AVAlertNote("Serious Memory Allocation Error");
           return false;
     }

     PDInlineImageGetData(obj,bitsData,
  iattrs.dataLen);
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDInlineImageGetData

```
void PDInlineImageGetData (PDInlineImage obj, ASUns8* data,
ASInt32 dataLen);
```

Description

Gets the image data for an inline image.

Parameters

obj	The inline image whose data is obtained.
data	*(Filled by the method)* A buffer into which the image data will be placed.
dataLen	Number of bytes that **data** can hold. Must be large enough to hold the entire inline image. Use **PDInlineImageGetAttrs** to determine how much data is in the image.

Return Value

None

Exceptions

Raises **genErrBadParm** if **dataLen** < the amount of data in the image.

Notifications

None

Header File

PDCalls.h

Related Methods

PDInlineImageGetAttrs

Example

```
PDImageAttrs iattrs;
     ASUns8* bitsData;

     PDInlineImageGetAttrs(obj,&iattrs,
  sizeof(PDImageAttrs));

     if(NULL == (bitsData =
  (ASUns8 *)ASmalloc(iattrs.dataLen)) ){
           AVAlertNote("Serious Memory Allocation Error");
           return false;
     }

     PDInlineImageGetData(obj,bitsData,
  iattrs.dataLen);
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDLinkAnnot

PDLinkAnnotGetAction

```
PDAction PDLinkAnnotGetAction (PDLinkAnnot aLinkAnnot);
```

Description

Gets a link annotation's action. After you obtain the action, you can execute it with **AVDocPerformAction**.

Parameters

aLinkAnnot	The link annotation whose action is obtained.

Return Value

The link annotation's action.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

AVDocPerformAction
PDLinkAnnotSetAction

Example

```
PDLinkAnnot pdAnnot;
PDAction linkAction;
PDViewDestination viewDest;
ASInt32 page;
ASAtom fit;
ASFixedRect destRect;
ASFixed zoom;

linkAction = PDLinkAnnotGetAction(pdAnnot);
viewDest = PDActionGetDest(oldAction);
PDViewDestGetAttr(viewDest, &page, &fit,
     &destRect, &zoom);
AVDocPerformAction(AVAppGetActiveDoc(),
     linkAction);
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDLinkAnnotGetBorder

```
void PDLinkAnnotGetBorder (PDLinkAnnot aLinkAnnot,
PDLinkAnnotBorder* border);
```

Description

Gets the border of a link annotation.

Parameters

aLinkAnnot	The link annotation whose border is obtained.
border	*(Filled by the method)* Pointer to a structure containing the link border. Link corner radii are ignored by the Acrobat viewers.

Return Value

None

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDLinkAnnotSetBorder

Example

```
pdAnnot = PDPageAddNewAnnot(conPage,
     PDPageGetNumAnnots(conPage)-1,
     ASAtomFromString("Link"), &dstRect);
linkBorder.hCornerRadius = 16;
linkBorder.vCornerRadius = 16;
linkBorder.dashArrayLen = 0;
linkBorder.width = 1;
PDLinkAnnotSetBorder(pdAnnot, &linkBorder);
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDLinkAnnotRemoveAction

```
void PDLinkAnnotRemoveAction (PDLinkAnnot aLinkAnnot);
```

Description

Removes a link annotation's action.

Parameters

aLinkAnnot	The link annotation whose action is being removed.

Return Value

None

Exceptions

pdErrBadAction

Notifications

PDAnnotWillChange
PDAnnotDidChange

Header File

PDCalls.h

Related Methods

PDLinkAnnotGetAction
PDLinkAnnotSetAction

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDLinkAnnotSetAction

```
void PDLinkAnnotSetAction (PDLinkAnnot aLinkAnnot,
PDAction action);
```

Description

Sets a link annotation's action.

Parameters

aLinkAnnot	The link annotation whose action is set.
action	New action for the link annotation.

Return Value

None

Exceptions

None

Notifications

PDAnnotWillChange
PDAnnotDidChange

Header File

PDCalls.h

Related Methods

PDLinkAnnotGetAction

Example

```
PDLinkAnnot pdAnnot;
PDAction oldAction;
PDViewDestination viewDest;
ASInt32 page;
ASAtom fit;
ASFixedRect destRect;
ASFixed zoom;
PDPage tmp;

oldAction = PDLinkAnnotGetAction(pdAnnot);
viewDest = PDActionGetDest(oldAction);
PDViewDestGetAttr(viewDest, &page, &fit,
     &destRect, &zoom);
PDActionDestroy(oldAction);
tmp = PDDocAcquirePage(pdDoc, page);
PDAnnotGetTitle(pdAnnot, title,
     sizeof(title));
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDLinkAnnotSetBorder

```
void PDLinkAnnotSetBorder (PDLinkAnnot aLinkAnnot,
const PDLinkAnnotBorder* border);
```

Description

Sets a link annotation's border.

Parameters

aLinkAnnot	The link annotation whose border is set.
border	Pointer to a structure containing the link border. Link corner radii are ignored by the Acrobat viewers.

Return Value

None

Exceptions

PDAnnotDidChange
PDAnnotWillChange

Notifications

PDAnnotWillChange
PDAnnotDidChange

Header File

PDCalls.h

Related Methods

PDLinkAnnotGetBorder

Example

```
pdAnnot = PDPageAddNewAnnot(conPage,
     PDPageGetNumAnnots(conPage)-1,
     ASAtomFromString("Link"), &dstRect);
linkBorder.hCornerRadius = 16;
linkBorder.vCornerRadius = 16;
linkBorder.dashArrayLen = 0;
linkBorder.width = 1;
PDLinkAnnotSetBorder(pdAnnot, &linkBorder);
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDNameTree

PDNameTreeEnum

```
void PDNameTreeEnum (PDNameTree theTree, CosObjEnumProc proc,
void* clientData);
```

Description

Enumerates the entries in the tree.

Parameters

theTree	A name tree.
proc	A procedure to call once for each name/object pair in **theTree**. The **obj**/**value** pair in **proc** correspond to the Cos string and CosObj values of each leaf in the tree.
clientData	Data used by the enumeration procedure. **clientData** is passed to the enumeration procedure **proc** each time an entry is encountered.

Return Value

None

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDNameTreeGet
PDNameTreePut
PDNameTreeRemove

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDNameTreeEqual

```
ASBool PDNameTreeEqual (PDNameTree tree1, PDNameTree tree2);
```

Description

Compares two name trees to determine if they are the same object.

Parameters

tree1	A name tree.
tree2	Another name tree.

Return Value

true if the two name trees are equivalent, **false** otherwise.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDNameTreeIsValid

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDNameTreeFromCosObj

```
PDNameTree PDNameTreeFromCosObj (CosObj obj);
```

Description

Creates a type cast of the **cosObj** to a name tree. This does not copy the object.

Parameters

obj	The **CosObj** for which a **PDNameTree** representation is desired.

Return Value

A **PDNameTree** representation of **obj.**

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDNameTreeNew
PDNameTreeGetCosObj

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDNameTreeGet

```
ASBool PDNameTreeGet (PDNameTree theTree, const char* name,
ASInt32 nameLen, CosObj* value);
```

Description

Retrieves an object from the name tree.

Parameters

theTree	The **PDNameTree** from which an object is retrieved.
name	The name of the object within **theTree** to get. This is a Cos-style string, not a C string.
nameLen	The length of **name.**
value	*(Filled by the method)* The Cos object corresponding to **name** within **theTree.**

Return Value

true if the object was retrieved, **false** if no object with this name exists.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDNameTreePut
PDNameTreeRemove

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDNameTreeGetCosObj

```
CosObj PDNameTreeGetCosObj (PDNameTree theTree);
```

Description

Creates a type cast of the name tree to a **cosObj**. This does not copy the object.

Parameters

theTree	The **PDNameTree** for which a **CosObj** representation is desired.

Return Value

A **CosObj** representation of **theTree.**

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDNameTreeNew
PDNameTreeFromCosObj

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDNameTreeIsValid

```
ASBool PDNameTreeIsValid (PDNameTree theTree);
```

Description

Validates whether a **PDNameTree** is a **CosDict** Cos object or not

Parameters

theTree	The **PDNameTree** whose validity is desired.

Return Value

true if the name tree is a **CosDict**, **false** otherwise.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDNameTreeEqual

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDNameTreeLookup

```
CosObj PDNameTreeLookup (CosObj nameTree, char* name,
ASInt32 nameLen);
```

Description

Given a name tree (such as the Dests tree in the **Names** dictionary) and a string, find the **CosObj** in the tree that matches the string.

See Section 3.8.4 in the *PDF Reference* for more information on name trees.

Parameters

nameTree	The name tree in which to search.
name	The name to search for. The name tree uses Cos-style strings, which may use Unicode encoding, and these may contain bytes with zeroes in them (high bytes of ASCII characters). NOTE: **name** is not a C-style string. Cos string objects can contain NULL chars. Standard C string-handling functions may not work as expected.
nameLen	Length of **name**, in bytes.

Return Value

The Cos object associated with the specified name, which is the array element following the name.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDNameTreeGet
PDNameTreePut

Example

```
CosObj result = CosNewNull();
CosObj nameTree, name;
char* pName, *p;
ASInt32 nameLen;

/* Assume nameTree and name have appropriate values */
p = CosStringValue(name, &nameLen);
pName = (char *) ASmalloc(nameLen);
p = CosStringValue(name, &nameLen); /* acquire again in case malloc
caused a flush */
memcpy(pName, p, nameLen);

result = PDNameTreeLookup(nameTree, pName, nameLen);
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020002** or higher.

PDNameTreeNew

```
PDNameTree PDNameTreeNew (PDDoc pdDoc);
```

Description

Creates a new name tree in the document.

Parameters

pdDoc	The document for which a new name tree is desired.

Return Value

The newly-created name tree or a **NULL CosObj** if Acrobat is unable to create a **PDNameTree** for the document specified by **pdDoc**.

PDNameTreeIsValid should be called to determine if the number tree returned by **PDNameTreeNew** is usable.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDNameTreeFromCosObj
PDNameTreeGetCosObj
PDNameTreeIsValid
PDNameTreeRemove

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDNameTreeNotifyNameAdded

```
ACCB1 void ACCB2 PDNameTreeNotifyNameAdded
(PDNameTree theTree, CosObj key, CosObj value);
```

Description

A new name has been added to **theTree**.

Parameters

theTree	The **PDNameTree** to which a name had been added.
key	The name of the object within **theTree** that was added. This is a Cos string, not a C string.
value	*(Filled by the method)* The Cos object corresponding to the object name that was added to **theTree**.

Related Notifications

PDNameTreeNotifyNameAdded
PDNameTreeNotifyNameRemoved

Methods

PDNameTreeNotifyNameRemoved

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDNameTreeNotifyNameRemoved

```
ACCB1 void ACCB2 PDNameTreeNotifyNameRemoved
(PDNameTree theTree, CosObj removedName);
```

Description

A name has been removed from **theTree**.

Parameters

theTree	The **PDNameTree** from which the name had been removed.
removedName	The name within **theTree** that was removed.

Related Notifications

PDNameTreeNotifyNameAdded
PDNameTreeNotifyNameRemoved

Related Methods

PDNameTreeNotifyNameAdded

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDNameTreePut

```
void PDNameTreePut (PDNameTree theTree, CosObj key,
CosObj value);
```

Description

Puts a new entry in the name tree. If an entry with this name is already in the tree, it is replaced.

Parameters

theTree	The name tree for which a new entry is added
key	The name of the object to put in the tree. This is a Cos-style string, not a C string. This allows the use of an existing indirect object for the key rather than forcing the creation of a new object.
value	The Cos object to be associated with **key**.

Return Value

None

Exceptions

None

Notifications

PDNameTreeNameAdded

Header File

PDCalls.h

Related Methods

PDNameTreeGet

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDNameTreeRemove

```
void PDNameTreeRemove (PDNameTree theTree, const char* key,
ASInt32 keyLen);
```

Description

Removes the specified object from the tree. Does nothing if no object with that name exists.

Parameters

theTree	The name tree from which an entry is removed.
key	The name of the entry to remove. This is a Cos-style string, not a C string.
keyLen	Length of key name, in bytes.

Return Value

None

Exceptions

None

Notifications

PDNameTreeNameRemoved

Header File

PDCalls.h

Related Methods

PDNameTreeGet
PDNameTreePut

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDNumTree

PDNumTreeEnum

```
void PDNumTreeEnum (PDNumTree theTree, CosObjEnumProc proc,
void* clientData);
```

Description

Enumerates the entries in the tree.

Parameters

theTree	A number tree.
proc	A procedure to call once for each number destination pair in **theTree**.
clientData	Data used by the enumeration procedure. **clientData** is passed to the enumeration procedure **proc** each time a number tree is encountered.

Return Value

None

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDNumTreeGet
PDNumTreePut

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDNumTreeEqual

```
ASBool PDNumTreeEqual (PDNumTree tree1, PDNumTree tree2);
```

Description

Compares two number trees to determine if they are the same object.

Parameters

tree1	A number tree.
tree2	Another number tree.

Return Value

true if the two number trees are equivalent, **false** otherwise.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDNumTreeIsValid

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDNumTreeFromCosObj

```
PDNumTree PDNumTreeFromCosObj (CosObj obj);
```

Description

Creates a type cast of the **cosObj** to a number tree.

Parameters

obj	The **CosObj** for which a **PDNumTree** representation is desired.

Return Value

A **PDNumTree** representation of **obj.**

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDNumTreeNew
PDNumTreeGetCosObj

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDNumTreeGet

```
ASBool PDNumTreeGet (PDNumTree theTree, ASInt32 key,
CosObj* value);
```

Description

Retrieves an object from the number tree.

Parameters

theTree	The **PDNumTree** requested.
key	The number of the entry to retrieve.
value	*(Filled by the method)* The value associated with **key**.

Return Value

true if the object was retrieved, **false** if no object with this number exists.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDNumTreePut
PDNumTreeRemove

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDNumTreeGetCosObj

```
CosObj PDNumTreeGetCosObj (PDNumTree theTree);
```

Description

Creates a type cast of the number tree to a **cosObj**.

Parameters

theTree	The **PDNumTree** for which a **CosObj** representation is desired.

Return Value

A **CosObj** representation of **theTree.**

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDNumTreeNew
PDNumTreeFromCosObj

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDNumTreeIsValid

```
ASBool PDNumTreeIsValid (PDNumTree theTree);
```

Description

Validates whether a **PDNumTree** is a **CosDict** Cos object or not

Parameters

theTree	The **PDNumTree** whose validity is desired.

Return Value

true if the number tree is a **CosDict**, **false** otherwise.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDNumTreeEqual

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDNumTreeNew

```
PDNumTree PDNumTreeNew (PDDoc pdDoc);
```

Description

Creates a new number tree in the document.

Parameters

pdDoc	The document for which a new number tree is desired.

Return Value

The newly-created number tree or a **NULL CosObj** if Acrobat is unable to create a **PDNumTree** for the document specified by **pdDoc**.

PDNumTreeIsValid should be called to determine if the number tree returned by **PDNumTreeNew** is usable.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDNumTreeFromCosObj
PDNumTreeGetCosObj
PDNumTreeIsValid

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDNumTreePut

```
void PDNumTreePut (PDNumTree theTree, ASInt32 key,
CosObj value);
```

Description

Puts a new entry in the number tree. If an entry with this number is already in the tree, it is replaced.

Parameters

theTree	The number tree for which a new entry is added
key	The number of the entry.
value	The value associated with **key**.

Return Value

None

Exceptions

None

Notifications

PDNumTreeNumAdded

Header File

PDCalls.h

Related Methods

PDNumTreeGet
PDNumTreeRemove

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDNumTreeRemove

```
void PDNumTreeRemove (PDNumTree theTree, ASInt32 key);
```

Description

Removes the specified object from the tree. Does nothing if no object with that number exists.

Parameters

theTree	The number tree from which an entry is removed.
key	The number of the entry to remove.

Return Value

None

Exceptions

None

Notifications

PDNumTreeNumRemoved

Header File

PDCalls.h

Related Methods

PDNumTreeGet
PDNumTreePut

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDPage

PDPageAcquirePDEContent

```
PDEContent PDPageAcquirePDEContent (PDPage page,
ExtensionID clientID);
```

Description

Creates a **PDEContent** from the **PDPage**'s contents and resources. The **PDEContent** is cached, so that subsequent calls on the same **PDPage** return the same **PDEContent**, even if the request is from another PDFEdit client. The **PDEContent** remains in the cache as long as someone has it acquired—until someone not using the PDFEdit API changes the **PDPage**'s contents, such as the viewer rotating a page 90 degrees.

Do not call **PDERelease** on **PDEContent** you have acquired with **PDPageAcquirePDEContent**; call **PDPageReleasePDEContent** to release it.

Parameters

page	The page whose content object is acquired.
clientID	Identifies the caller/client. For plug-ins, this should be the **gExtensionID** extension. For the Adobe PDF Library, if there is only one client of the PDFEdit subsystem, **clientID** should be zero. If there are multiple clients, each should specify a nonzero, non-negative **clientID**. (A negative **clientID** is reserved for the implementation.)

Return Value

A **PDEContent** representing the page's contents.

Exceptions

None

Notifications

None

Header File

PagePDECntCalls.h

Related Methods

PDEContentCreateFromCosObj
PDPageReleasePDEContent

PDPageSetPDEContent

Availability

Available if **PI_PAGE_PDE_CONTENT_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDPageAddAnnot

```
void PDPageAddAnnot (PDPage aPage, ASInt32 addAfter,
PDAnnot annot);
```

Description

Adds an annotation at the specified location in a page's annotation array.

Parameters

aPage	The page to which the annotation is added.
addAfter	The index into the page's annotation array where the annotation is added. See Section 3.6.2 in the *PDF Reference* for a description of the annotation array. The first annotation in the array has an index of zero. Passing a value of –2 adds the annotation to the end of the array. Passing other negative values produces undefined results.
annot	The annotation to add.

Return Value

None

Exceptions

Raises **pdErrOpNotPermitted** if:

1) The annotation is of subtype Text and the document's permissions do not include **pdPermEditNotes** (see **PDPerms**).

or

2) The annotation is of any other subtype and the document's permissions do not include **pdPermEdit**.

Notifications

PDPageWillAddAnnot
PDPageDidAddAnnot

Header File

PDCalls.h

Related Methods

PDPageCreateAnnot
PDPageAddNewAnnot
PDPageRemoveAnnot

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDPageAddCosContents

```
void PDPageAddCosContents (PDPage page, CosObj newContents);
```

Description

Completely *replaces* the contents of the specified page with **newContents.**

Parameters

page	The page whose Cos contents are replaced.
newContents	A stream Cos object or an array Cos object containing the new contents (stream Cos objects) for **page**.

Return Value

None

Exceptions

None

Notifications

PDDocDidChangePages

Header File

PDCalls.h

Related Methods

PDPageRemoveCosContents

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDPageAddCosResource

```
void PDPageAddCosResource (PDPage page, char* resType,
char* resName, CosObj resObj);
```

Description

Adds a Cos resource to a page object. See Section 3.7.2 in the *PDF Reference* for a description of page resources.

The necessary dictionaries are created automatically if the page does not already have any resources of the type specified by **resType**, or does not have a Resources dictionary. For example, if you specify a font resource, but the page does not already have a font resource dictionary, this method automatically creates one and puts the font you specify into it.

ProcSet resources cannot be added using this method; they must be added using Cos-level methods to:

1) Get the page's Resources dictionary

2) Get the **ProcSet** array from the Resources dictionary

3) Add an element to the **ProcSet** array.

Parameters

page	The page to which a resource is added.
resType	Resource type. The named resource types in PDF are: **Font**, **XObject**, **ColorSpace, Extended graphics state, Pattern**, and **Property list**. Although **ProcSet** is also a resource type, it cannot be added by this method.
resName	Resource name. For example, the name of a font might be **F1**.
resObj	The Cos object being added as a resource to **page**.

Return Value

None

Exceptions

None

Notifications

PDDocDidChangePages

Header File

PDCalls.h

Related Methods

PDPageRemoveCosResource
PDPageGetCosResources

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDPageAddNewAnnot

```
PDAnnot PDPageAddNewAnnot (PDPage apage, ASInt32 addAfter,
ASAtom subType, const ASFixedRect* initialRect);
```

Description

Adds an annotation to the page. To make the annotation visible after adding it, convert the coordinates of **initialRect** to device coordinates using **AVPageViewRectToDevice**, then call **AVPageViewInvalidateRect** using the converted rectangle.

This method is equivalent to calling **PDPageCreateAnnot** followed by **PDPageAddAnnot**.

The **PDPageWillAddAnnot** and **PDPageDidAddAnnot** notifications are broadcast *before* the **PDPageAddNewAnnot** method returns. If you want to finish formatting the annotation before these notifications are called, for example by adding additional key-value pairs to the annotation dictionary, you should call **PDPageCreateAnnot** followed by **PDPageAddAnnot** instead of **PDPageAddNewAnnot**.

Parameters

apage	The page to which the annotation is added.
addAfter	Where to add the annotation in the page's annotation array. See Section 3.6.2 in the *PDF Reference* for a description of the annotation array. Passing a value of –2 adds the annotation to the end of the array (this is generally what you should do unless you have a need to place the annotation at a special location in the array). Passing a value of –1 adds the annotation to the beginning of the array. Passing other negative values produces undefined results.
subType	The subtype of the annotation to add.
initialRect	Pointer to a rectangle specifying the annotation's bounds, specified in user space coordinates.

Return Value

The newly-created annotation.

Exceptions

Raises **pdErrOpNotPermitted** if:

1) The annotation is of subtype Text and the document's permissions do not include **pdPermEditNotes** (see **PDPerms**).

or

2) The annotation is of any other subtype and the document's permissions do not include **pdPermEdit**.

Notifications

PDPageWillAddAnnot
PDPageDidAddAnnot

Header File

PDCalls.h

Related Methods

PDPageCreateAnnot
PDPageAddAnnot
PDPageRemoveAnnot

Example

```
AnnotCnt = PDPageGetNumAnnots(TmpPDPage);
myannot= PDPageAddNewAnnot(TmpPDPage,
     AnnotCnt-1,
ASAtomFromString(STR_EXTENSION_NAME),
     &rect);
/* Display the annotation on the page. */
AVPageViewGetAnnotRect(avPageView,
     ClipAnnotation, &avRect );
AVPageViewInvalidateRect(avPageView,
     &avRect);
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDPageCreateAnnot

```
PDAnnot PDPageCreateAnnot (PDPage aPage, ASAtom subtype,
const ASFixedRect* initialLocation);
```

Description

Creates a new annotation, associated with the specified page's **CosDoc**, but not added to the page. Use **PDPageAddAnnot** to add the annotation to the page.

If you want to create an annotation that prints even if the annotation handler is not present, you have to provide an appearance for it. To do this, add an appearance key (**AP**) to the annotation dictionary, in which you place the Forms XObject for the Normal (**N**), Rollover (**R**), and Down (**D**) appearances; only the Normal appearance is required. Also, add a flags field (**F**) to the annotation dictionary and set the appropriate value for the bit field. A value of 4, which displays the annotation if the handler is not present, shows the annotation, and allows printing it is recommended.

Parameters

aPage	The page to whose **PDDoc** the annotation is added.
subtype	Subtype of annotation to create.
initialLocation	Pointer to a rectangle specifying the annotation's bounds, specified in user space coordinates.

Return Value

The newly-created annotation.

Exceptions

Raises **pdErrOpNotPermitted** if:

1) The annotation is of subtype Text and the document's permissions do not include **pdPermEditNotes** (see **PDPerms**).

or

2) The annotation is of any other subtype and the document's permissions do not include **pdPermEdit**.

Notifications

PDAnnotWasCreated

Header File

PDCalls.h

Related Methods

PDPageAddAnnot

PDPageAddNewAnnot

Example

```
PDAnnot annot;
annot = PDPageCreateAnnot(pdPage,
ASAtomFromString("Text"), &rect);
PDPageAddAnnot(pdPage, (ASInt32) 0, annot);
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDPageDrawContentsToWindow

```
void PDPageDrawContentsToWindow (PDPage page, void* window,
void* displayContext, ASBool isDPS, ASFixedMatrix* matrix,
ASFixedRect* updateRect, CancelProc cancelProc,
void* cancelProcClientData);
```

Description

Draws the contents of a page into the specified window.

This method just draws a bitmap to the window. If you want a live document, you need to open an **AVDoc** for the PDF file.

The page can also be derived from a **PDDoc**.

In UNIX, this method cannot be used to draw into a window. UNIX developers should instead use **AVDocOpenFromASFileWithParams** to draw PDF files into their own window from a plug-in.

NOTE: This method cannot be reliably used to print to a device.

Parameters

page	The page to draw into **window**.
window	Pointer to a platform-dependent window object (**WindowPtr** or **CWindowPtr** in Mac OS, or **HWND** in Windows). In Mac OS, to draw into an offscreen GWorld, pass **NULL** in **window** and pass the **GWorldPtr** in **displayContext**. In Windows, to draw into an offscreen DC, pass **NULL** for **window**.
displayContext	A platform-dependent display context structure (**GWorldPtr** in Mac OS, **HDC** in Windows). In Mac OS, **displayContext** is ignored if **window** is non-**NULL**. NOTE: **displayContext** cannot be reliably used as the hDC for a printer device.
isDps	Currently unused. Always set to **false**.
matrix	Pointer to the matrix to concatenate onto the default page matrix. It is useful for converting from page to window coordinates and for scaling.
updateRect	Pointer to the rectangle to draw, defined in user space coordinates. Any objects outside of **updateRect** will not be drawn. All objects are drawn if **updateRect** is **NULL**.

cancelProc	Procedure called periodically to check for user cancel of the drawing operation. The default cancel proc can be obtained using **AVAppGetCancelProc**. May be **NULL**, in which case no cancel proc is used.
cancelProcClientData	Pointer to user-supplied data to pass to **cancelProc** each time it is called. Should be **NULL** if **cancelProc** is **NULL**.

Return Value

None

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

AVAppGetCancelProc
PDDrawCosObjToWindow
PDPageDrawContentsToWindowEx

Example

```
/* Example 1 for UNIX */
XWindowRec winrec;
memset (&winrec, 0, sizeof(winrec));

port = AVWindowGetPlatformThing(win);
winrec.display = XtDisplay(port);
winrec.window = XtWindow(port);
winrec.CMap = None;
winrec.colorStrategy = CS_Find;
PDPageDrawContentsToWindow(page, winrec,
     displayContext, false, &matrix, 0, 0, 0);

/* Example 2 for Windows */
/* Write the page in the active AVDoc to the window */
CancelProc cancelProc;
void* cancelProcData;
HWND window;

AVDoc adoc;
PDDoc pdoc;
PDPage page;
HDC dc;
ASFixedMatrix matrix;
AVPageView pageview;
ASInt32 pagenum;

cancelProc = AVAppGetCancelProc(&cancelProcData);
adoc = AVAppGetActiveDoc();
pdoc = AVDocGetPDDoc(adoc);
pageview = AVDocGetPageView(adoc);
pagenum = AVPageViewGetPageNum(pageview);

page = PDDocAcquirePage(pdoc, pagenum);
AVPageViewGetPageToDevMatrix(pageview, &matrix);
dc = GetDC(window);

PDPageDrawContentsToWindow(page, NULL, (void *)dc, false, &matrix, NULL,
cancelProc, cancelProcData);
PDPageRelease(page);
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDPageDrawContentsToWindowEx

```
void PDPageDrawContentsToWindowEx(PDPage page, void* window,
void* displayContext, ASBool isDPS, ASFixedMatrix* matrix,
ASUns32 flags, ASFixedRect* updateRect, CancelProc cancelProc,
void* cancelProcClientData);
```

Description

Provides control over the rendering of annotations on the page to be drawn into **window**. Provides the ability to specify the flags passed in to the **PDPageDrawContentsToWindows** function.

NOTE: Acrobat 5.0 Implementation Note: This function can only be called with a **flags** value of **0**. The function is not supported with any other values for **flags**. Adobe may expand that in the future. **flags = 0** means "do not render the annot faces." If you want to draw to a window with annots, you should call the original **PDPageDrawContentsToWindow**. In general, Adobe recommends that you not use **PDPageDrawContentsToWindowsEx** in the Acrobat 5.0 release unless you have a specific need to prevent the drawing of annotations.

Parameters

page	The page to draw into **window**.
window	Pointer to a platform-dependent window object (**WindowPtr** or **CWindowPtr** in Mac OS, or **HWND** in Windows). In Mac OS, to draw into an offscreen **GWorld**, pass **NULL** in **window** and pass the GWorldPtr in **displayContext**. In Windows, to draw into an offscreen DC, pass **NULL** for **window**.
displayContext	A platform-dependent display context structure (**GWorldPtr** in Mac OS,**HDC** in Windows). In Mac OS, **displayContext** is ignored if window is non-**NULL** NOTE: Note: **displayContext** cannot be reliably used as the hDC for a printer device.
isDPS	Currently unused. Always set to **false**.
matrix	Pointer to the matrix to concatenate onto the default page matrix. It is useful for converting from page to window coordinates and for scaling.
flags	See above. The only value you should use is **0**.
updateRect	A rectangle represented by the coordinates of its four sides.

cancelProc	Procedure called periodically to check for user cancel of the drawing operation. The default cancel procedure can be obtained using **AVAppGetCancelProc**. May be **NULL** in which case no cancel procedure is used.
cancelProcClientData	Pointer to user-supplied data to pass to **cancelProc** each time it is called. Should be **NULL** if **cancelProc** is **NULL**.

Return Value

None

Exceptions

pdPErrUnableToCreateRasterPort

Notifications

None

Header File

PDCalls.h

Related Methods

AVAppGetCancelProc
PDDrawCosObjToWindow
PDPageDrawContentsToWindow

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDPageEnumContents

```
void PDPageEnumContents (PDPage page,
PDGraphicEnumMonitor mon, void* clientData);
```

Description

Enumerates the contents of a page, calling a procedure for each drawing object in the page description.

NOTE: This method is provided only for backwards compatibility. It has not been updated beyond PDF Version 1.1 and may not work correctly for newly created PDF 1.2 or later files. You should use the PDFEdit API to enumerate page contents.

Parameters

page	The page whose contents are enumerated.
mon	Pointer to a structure containing user-supplied callbacks that are called for each drawing operator on a page. Enumeration ends if any procedure returns **false**.
clientData	Pointer to user-supplied data to pass to **mon** each time it is called.

Return Value

None

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

None

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDPageEnumResources

```
void PDPageEnumResources (PDPage page,
PDResourceEnumMonitor mon, void* clientData);
```

Description

(*Obsolete, provided only for backwards compatibility)* Enumerates the page's resources, calling an enumeration procedure for each resource.

Instead of this method, use **PDDocEnumResources**.

NOTE: This method is provided only for backwards compatibility. It has not been updated beyond PDF Version 1.1 and may not work correctly for newly created PDF 1.2 or later files.

Parameters

page	The page whose Cos resources are enumerated.
mon	Pointer to a structure containing user-supplied callbacks that are called for each of the page's resources. Enumeration ends if any procedure returns **false**.
clientData	Pointer to user-supplied data to pass to each procedure in **mon** when it is called.

Return Value

None

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDDocEnumResources
PDPageGetCosResources

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDPageGetAnnot

```
PDAnnot PDPageGetAnnot (PDPage aPage, ASInt32 annotIndex);
```

Description

Gets the **annotIndex** annotation on the page.

Parameters

aPage	The page on which the annotation is located.
annotIndex	The index of the annotation to get on **apage**. The first annotation on a page has an index of zero.

Return Value

Annotation object.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDPageGetNumAnnots

Example

```
/* select 0th link annot on 0th page
     (assumes that it's a link) */
#define k_Annot
     ASAtomFromString("Annotation")

CosObj tmp;
PDAnnot annot, *annotSel;
PDAction action;

DURING
     PDDocAcquirePage(pdDoc, 0);  /* acquire
            0th page */
     annot = PDPageGetAnnot(pdPage, 0);  /*
            get 0th annot on pdPage */
     AnnotSel = ASmalloc(sizeof(PDAnnot));
     if(annotSel)
     {
            tmp = PDActionGetCosObj(action); /*
                  so we can copy its contents */
            *annotSel = tmp;  /* copy the
                  contents. The selection server will
                  ASfree the pointer when done with
                  annotSel */
            AVDocSetSelection(avdoc, k_Annot,
                  &annotSel, true);
     }
     PDPageRelease(pdPage);
HANDLER
     if(pdPage)
            PDPageRelease(pdPage);
END_HANDLER
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDPageGetAnnotIndex

```
ASInt32 PDPageGetAnnotIndex (PDPage aPage, PDAnnot anAnnot);
```

Description

Gets the index of a given annotation object on a given page.

Parameters

aPage	The page to which the annotation is attached.
anAnnot	The annotation whose index is obtained.

Return Value

The annotation's index. Returns –1 if the annotation is not on the page.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDPageGetAnnot
PDPageGetAnnotSequence

Example

```
ASInt32 ndx = PDPageGetAnnotIndex(pdPage,
     annot);
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDPageGetAnnotSequence

```
ASInt32 PDPageGetAnnotSequence (PDPage page, PDAnnot annot);
```

Description

Returns the index of the specified annotation for the given page. This method is similar to **PDPageGetAnnotIndex** but it also checks the annotations information flags to determine whether it is okay provide the index, before actually returning it. The flags are checked to make sure that **PDAnnotOperationSummarize** flag is set, meaning that it is okay to summarize the annotations. The flags are obtained from the annotation handler's **PDAnnotHandlerGetAnnotInfoFlagsProc**.

Parameters

page	The page for which an annotation index is desired.
annot	The annotation for which an index is desired.

Return Value

The index of the specified annotation or -1 if the annotation is not in the page.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDPageGetAnnot
PDPageGetAnnotIndex

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDPageGetBBox

```
void PDPageGetBBox (PDPage page, ASFixedRect* bboxP);
```

Description

Gets the bounding box for a page. The bounding box is the rectangle that encloses all text, graphics, and images on the page.

Parameters

page	The page whose bounding box is obtained.
bboxP	*(Filled by the method)* Pointer to a rectangle specifying the page's bounding box, specified in user space coordinates.

Return Value

None

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDPageGetMediaBox
PDPageGetCropBox

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDPageGetBox

```
ASBool PDPageGetBox (PDPage page, ASAtom boxName,
ASFixedRect* box);
```

Description

Returns the box specified for the page object intersected with the media box. If the value for **boxName** is **CropBox**, this call is equivalent to **PDPageGetCropBox**; if the value is **MediaBox**, this call is equivalent to **PDPageGetMediaBox**.

Parameters

page	The page whose box is obtained.
boxName	An **ASAtom** representing the type of box. Examples: **ArtBox**, **BleedBox**, **CropBox**, **TrimBox**, or **MediaBox**.
box	*(Filled by the method)* An **ASFixedRect** specifying the page's box.

Return Value

true if the requested box was specified for the page; **false** otherwise.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDPageSetBox

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDPageGetCosObj

```
CosObj PDPageGetCosObj (PDPage page);
```

Description

Gets the dictionary Cos object associated with a page. This method does not copy the object, but is instead the logical equivalent of a type cast.

Parameters

page	The page whose Cos object is obtained.

Return Value

The dictionary Cos object associated with **page**.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

None

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDPageGetCosResources

```
CosObj PDPageGetCosResources (PDPage page);
```

Description

Gets the Cos object corresponding to a page's resource dictionary. A page's resource Cos object may either be directly in the Page Cos object and apply only to the page. Or, it may be in the Pages tree, be shared by multiple pages, and applies to all Page nodes below the point in the Pages tree where it is located.

Parameters

page	The page whose Cos resources are obtained.

Return Value

The dictionary Cos object associated with the page's resource.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDPageAddCosResource

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDPageGetCropBox

```
void PDPageGetCropBox (PDPage page, ASFixedRect* cropBoxP);
```

Description

Gets the crop box for a page. The crop box is the region of the page to display and print.

Parameters

page	The page whose crop box is being obtained.
cropBoxP	*(Filled by the method)* Pointer to a rectangle specifying the page's crop box, specified in user space coordinates.

Return Value

None

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDPageSetCropBox
PDPageGetMediaBox
PDPageGetBBox

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDPageGetDefaultMatrix

```
void PDPageGetDefaultMatrix (PDPage pdpage,
ASFixedMatrix* defaultMatrix);
```

Description

Gets the matrix that transforms user space coordinates to rotated and cropped coordinates. The origin of this space is the bottom-left of the rotated, cropped page. Y is increasing.

Parameters

pdpage	The page whose default transformation matrix is obtained.
defaultMatrix	*(Filled by the method)* Pointer to the default transformation matrix.

Return Value

None

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDPageGetFlippedMatrix

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDPageGetDoc

```
PDDoc PDPageGetDoc (PDPage page);
```

Description

Gets the document that contains the specified page.

Parameters

page	The page whose document is obtained.

Return Value

The document that contains the page.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDDocAcquirePage

Example

```
PDDoc doc = PDPageGetDoc(pdPage);
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDPageGetDuration

```
ASFixed PDPageGetDuration (PDPage page);
```

Description

Gets the page's automatic-advance timing value—the maximum amount of time the page is displayed before the viewer automatically advances to the next page.

Parameters

page	The page whose timing value is obtained.

Return Value

The automatic-advance timing for the page, in seconds. If the page does not have an advance timing value, **fxDefaultPageDuration** (representing positive infinity, that is, never advance) is returned.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDPageSetDuration

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020002** or higher.

PDPageGetFlippedMatrix

```
void PDPageGetFlippedMatrix (PDPage pdpage,
ASFixedMatrix* flipped);
```

Description

Gets the matrix that transforms user space coordinates to rotated and cropped coordinates. The origin of this space is the top-left of the rotated, cropped page. Y is decreasing.

Parameters

pdpage	The page whose flipped transformation matrix is obtained.
flipped	*(Filled by the method)* Pointer to the flipped transformation matrix.

Return Value

None

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDPageGetDefaultMatrix

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDPageGetMediaBox

```
void PDPageGetMediaBox (PDPage page, ASFixedRect* mediaBoxP);
```

Description

Gets the media box for a page. The media box is the “natural size” of the page, for example, the dimensions of an A4 sheet of paper.

Parameters

page	The page whose media box is obtained.
mediaBoxP	*(Filled by the method)* Pointer to a rectangle specifying the page’s media box, specified in user space coordinates.

Return Value

None

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDPageSetMediaBox
PDPageGetCropBox
PDPageGetBBox

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDPageGetNumAnnots

```
ASInt32 PDPageGetNumAnnots (PDPage aPage);
```

Description

Gets the number of annotations on a page.

Parameters

aPage	The page for which the number of annotations is obtained.

Return Value

The number of annotations on **aPage**.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDPageGetAnnot

Example

```
AnnotCnt = PDPageGetNumAnnots(TmpPDPage);
myannot= PDPageAddNewAnnot(TmpPDPage,
     AnnotCnt-1,
ASAtomFromString(STR_EXTENSION_NAME),
     &rect);
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDPageGetNumber

```
ASInt32 PDPageGetNumber (PDPage page);
```

Description

Gets the page number for the specified page.

Parameters

page	The page whose page number is obtained.

Return Value

The page within the document. The first page is 0.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDPageNumFromCosObj

Example

```
if(!PDPageGetNumber(pdPage))
     AVAlertNote("First page!");
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDPageGetPalette

```
ASBool PDPageGetPalette (PDPage page, void* displayContext,
char* table);
```

Description

Useful for obtaining the static, platform-specific palette; the bitmap must be already selected into the **displayContext** to get the palette. This API was exposed for the purpose of the ImageConversion plug-in. When that code uses **PDPageDrawContentsToWindow** to get a bitmap from AGM, it needs the palette that AGM used in order to get good/correct results.

Parameters

page	The page whose palette is obtained.
displayContext	The bitmap.
table	*(Filled by the method)* The palette.

Return Value

true if the palette was returned; **false** otherwise.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

None

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDPageGetPDEContentFilters

```
ASBool PDPageGetPDEContentFilters (PDPage page,
ASInt32* numFilters, ASAtom** filters);
```

Description

Gets filters used by **PDPageSetPDEContent**.

The caller is responsible for allocating the filter array **filters** that receives the filters. **filters** can be **NULL** to just obtain the number of filters.

Parameters

page	The page whose content filters are obtained.
numFilters	*(Filled by the method)* Number of filters used by **PDPageSetPDEContent**.
filters	*(Filled by the method)* Filters used by **PDPageSetPDEContent**. If **NULL**, **numFilters** contains the number of filters.

Return Value

true if filters are obtained, **false** if page's contents are not cached.

Exceptions

None

Notifications

None

Header File

PagePDECntCalls.h

Related Methods

PDPageSetPDEContent
PDPageSetPDEContentFilters

Availability

Available if **PI_PAGE_PDE_CONTENT_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDPageGetPDEContentFlags

```
ASBool PDPageGetPDEContentFlags (PDPage page, ASUns32* flags);
```

Description

Gets flags used by **PDPageSetPDEContent**.

Parameters

page	The page whose content flags are obtained.
flags	*(Filled by the method)* **PDEContentToCosObjFlags** flags.

Return Value

true if flags obtained, **false** if page's contents are not cached.

Exceptions

None

Notifications

None

Header File

PagePDECntCalls.h

Related Methods

PDPageSetPDEContent
PDPageSetPDEContentFlags

Availability

Available if **PI_PAGE_PDE_CONTENT_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDPageGetRotate

```
PDRotate PDPageGetRotate (PDPage page);
```

Description

Gets the rotation value for a page.

Parameters

page	The page whose rotation is obtained.

Return Value

Rotation value for the given page. Must be one of the **PDRotate** values.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDPageSetRotate

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDPageGetTransition

```
PDTrans PDPageGetTransition (PDPage page);
```

Description

Gets the transition for a given page.

Parameters

page	The page whose transition is obtained.

Return Value

The page's transition. If the page has no transition, returns a **NULL** transition.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDPageSetTransition
PDTransNull

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020002** or higher.

PDPageHasTransition

```
ASBool PDPageHasTransition (PDPage page);
```

Description

Tests whether a page has a transition.

Parameters

page	The page to test.

Return Value

`true` if the page has a transition, **`false`** otherwise.

Exceptions

None

Notifications

None

Header File

`PDCalls.h`

Related Methods

None

Availability

Available if **`PI_PDMODEL_VERSION`** (in `PIRequir.h`) is set to **`0x00020002`** or higher.

PDPageHasTransparency

```
ASBool PDPageHasTransparency (PDPage pdPage,
ASBool includeAnnotAppearances);
```

Description

Checks whether a page uses any transparency features.

NOTE: To determine whether the page uses transparency, the resources of the page must be enumerated (though the page contents do not need to be parsed). The page resources may not be optimized for slow (browser-based) connections, so calling **PDPageHasTransparency** before the page has been downloaded may cause unpleasant read behavior and performance problems.

Parameters

pdPage	The page to check.
includeAnnotAppearances	If **includeAnnotAppearances** is **true**, annotation appearances are included in the check; if **false** annotation appearances will be ignored.

Return Value

true if and only if the page uses any transparency features.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

None

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDPageNotifyContentsDidChange

```
void PDPageNotifyContentsDidChange (PDPage page);
```

Description

Broadcasts a **PDPageContentsDidChange** notification. If the Acrobat viewer is version 2.1 or later, also broadcasts a **PDPageContentsDidChangeEx** notification with **invalidateViews** set to **true**.

You must use this method after using Cos methods to change a page's contents. Do not use this method if you use **PDPageAddCosContents** or **PDPageRemoveCosContents** to change a page's contents, because those methods automatically generate the appropriate notifications.

Use **PDPageNotifyContentsDidChangeEx** instead of this method if you wish to suppress the Acrobat viewer's immediate redraw of the page.

Parameters

page	The page that changed.

Return Value

None

Exceptions

None

Notifications

PDPageContentsDidChange
PDPageContentsDidChangeEx (in version 2.1 and later)

Header File

PDCalls.h

Related Methods

PDPageAddCosContents
PDPageRemoveCosContents
PDPageNotifyContentsDidChangeEx

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDPageNotifyContentsDidChangeEx

```
void PDPageNotifyContentsDidChangeEx (PDPage page,
ASBool invalidateViews);
```

Description

Broadcasts a **PDPageContentsDidChange** notification and a **PDPageContentsDidChangeEx** notification. These notify the Acrobat viewer that a page's contents have been modified, and tells the Acrobat viewer whether or not to redraw the page immediately.

You must use this method after using Cos methods to change a page's contents. Do not use this method if you use **PDPageAddCosContents** or **PDPageRemoveCosContents** to change a page's contents, because those methods automatically generate the appropriate notifications.

If your plug-in must be compatible with version 2.0 of the Acrobat viewer, you must use **PDPageNotifyContentsDidChange** instead.

Parameters

page	The page that changed.
invalidateViews	**true** if the Acrobat viewer redraws the page view, **false** otherwise. This allows plug-ins to make a sequence of modifications to a page's contents, without having the entire page flash after each modification. Passing **true** for **invalidateViews** is equivalent to calling **PDPageNotifyContentsDidChange.**

Return Value

None

Exceptions

None

Notifications

PDPageContentsDidChange
PDPageContentsDidChangeEx

Header File

PDCalls.h

Related Methods

PDPageAddCosContents
PDPageRemoveCosContents
PDPageNotifyContentsDidChange

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020001** or higher.

PDPageNumFromCosObj

```
ASInt32 PDPageNumFromCosObj (CosObj pageObj);
```

Description

Gets the page number of the page specified by a Cos object.

Parameters

pageObj	Dictionary Cos object for the page whose number is obtained.

Return Value

The page within the document (the first page in a document is page number zero). Returns –1 if **pageObj** is a **NULL** Cos object.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDPageGetNumber

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDPagePDEContentWasChanged

```
void PDPagePDEContentWasChanged (PDPage page,
ExtensionID clientID);
```

Description

Indicates a page's **PDEContent** has changed.

Call this after you alter a **PDPage**'s **PDEContent** but do not call **PDPageSetPDEContent**, so others who have acquired the **PDEContent** know it has changed.

Parameters

page	The page whose content was changed.
clientID	Identifies the caller/client. For plug-ins, this should be the **gExtensionID** extension. For the Adobe PDF Library, if there is only one client of the PDFEdit subsystem, **clientID** should be zero. If there are multiple clients, each should specify a nonzero, non-negative **clientID**. (A negative **clientID** is reserved for the implementation.)

Return Value

None

Exceptions

None

Notifications

PagePDEContentDidChange

Header File

PagePDECntCalls.h

Related Methods

PDPageSetPDEContent

Availability

Available if **PI_PAGE_PDE_CONTENT_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDPageRegisterForPDEContentChanged

```
void PDPageRegisterForPDEContentChanged
(PagePDEContentDidChangeNPROTO proc, ExtensionID clientID);
```

Description

Registers for the **PagePDEContentDidChange** notification.

Parameters

proc	Callback for function to call when an acquired **PDPage**'s **PDEContent** has changed.
clientID	Identifies the caller/client. For plug-ins, this should be the **gExtensionID** extension. For the Adobe PDF Library, if there is only one client of the PDFEdit subsystem, **clientID** should be zero. If there are multiple clients, each should specify a nonzero, non-negative **clientID**. (A negative **clientID** is reserved for the implementation.)

Return Value

None

Exceptions

None

Notifications

PagePDEContentDidChange

Header File

PagePDECntCalls.h

Related Methods

PDPageRegisterForPDEContentNotCached
PDPageUnRegisterForPDEContentChanged

Availability

Available if **PI_PAGE_PDE_CONTENT_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDPageRegisterForPDEContentNotCached

```
void PDPageRegisterForPDEContentNotCached
(PagePDEContentNotCachedNPROTO proc, ExtensionID clientID);
```

Description

Register for the **PagePDEContentNotCached** notification.

This notification is also sent when others change (or delete) a **PDPage**'s contents without using PDFEdit methods. For instance, rotating or deleting a page in the viewer results in this notification being sent.

PDFEdit registers for almost a half dozen different notifications for the different ways Acrobat can alter page contents—you may need only this notification.

Parameters

proc	Callback for function to call when an acquired **PDPage**'s **PDEContent** is no longer valid.
clientID	Identifies the caller/client. For plug-ins, this should be the **gExtensionID** extension. For the Adobe PDF Library, if there is only one client of the PDFEdit subsystem, **clientID** should be zero. If there are multiple clients, each should specify a nonzero, non-negative **clientID**. (A negative **clientID** is reserved for the implementation.)

Return Value

None

Exceptions

None

Notifications

PagePDEContentNotCached

Header File

PagePDECntCalls.h

Related Methods

PDPageRegisterForPDEContentChanged
PDPageUnRegisterForPDEContentNotCached

Availability

Available if **PI_PAGE_PDE_CONTENT_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDPageRelease

```
void PDPageRelease (PDPage page);
```

Description

Decrements the specified page's reference count.

Parameters

page	The page whose reference count is decremented.

Return Value

None

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDBeadAcquirePage
PDDocAcquirePage

Example

```
dest = PDDocAcquirePage(pdDoc, ival-1);
newview = PDViewDestCreate(pdDoc, dest,
     k_XYZ, &destRect, fixedZero, ival-1);
newAction = PDActionNewFromDest(pdDoc,
     newview, pdDoc);
PDPageRelease(dest);
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDPageReleasePDEContent

```
ASInt32 PDPageReleasePDEContent (PDPage page,
ExtensionID clientID);
```

Description

Decrements a **PDPage**'s **PDEContent** internal reference count.

The **PDEContent** is *not* automatically deleted when the reference count becomes zero—it remains in the cache until the cache slot is needed for another **PDPage**. Thus, you don't need to keep a **PDEContent** acquired for performance reasons. There is a notification you can register for, that is sent when a **PDEContent** is actually removed from the cache, thus enabling the use of PDFEdit's tagging methods **PDEAddTag**, **PDEGetTag**, **PDERemoveTag** on the **PDEContent** object.

Parameters

page	The page whose content object's use count is decremented.
clientID	Identifies the caller/client. For plug-ins, this should be the **gExtensionID** extension. For the Adobe PDF Library, if there is only one client of the PDFEdit subsystem, **clientID** should be zero. If there are multiple clients, each should specify a nonzero, non-negative **clientID**. (A negative **clientID** is reserved for the implementation.)

Return Value

Updated reference count.

Exceptions

None

Notifications

None

Header File

PagePDECntCalls.h

Related Methods

PDPageAcquirePDEContent
PDPageSetPDEContent

Availability

Available if **PI_PAGE_PDE_CONTENT_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDPageRemoveAnnot

```
void PDPageRemoveAnnot (PDPage aPage, ASInt32 annotIndex);
```

Description

Removes an annotation from the specified page. Annotations are stored in Cos arrays, which are automatically compressed when an annotation is removed (see **CosArrayRemove**). For this reason, if you use a loop in which you remove annotations, structure the code so the loop processes from the highest to the lowest index. If you loop the other direction, you will skip over annotations immediately following ones you remove.

Parameters

aPage	The page from which the annotation is removed.
annotIndex	The index (into the page's annotation array) of the annotation to remove.

Return Value

None

Exceptions

Raises **pdErrOpNotPermitted** if:

1) The annotation is of subtype **Text** and the document's permissions do not include **pdPermEditNotes (see PDPerms)**.

or

2) The annotation is of any other subtype and the document's permissions do not include **pdPermEdit**.

Notifications

PDPageWillRemoveAnnot
PDPageDidRemoveAnnot

Header File

PDCalls.h

Related Methods

PDPageGetAnnotIndex
PDPageAddNewAnnot
PDPageAddAnnot

Example

```
for(i=PDPageGetNumAnnots(pdPage)-1;i>=0;
     i--)
{
     annot = PDPageGetAnnot(pdPage, i);
     if(PDAnnotIsValid(annot) &&
           PDAnnotGetSubtype(annot) ==
           ASAtomFromString("Link"))
     {
           PDPageRemoveAnnot(annot);
     }
}
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDPageRemoveCosContents

```
void PDPageRemoveCosContents (PDPage page);
```

Description

Removes the contents of the specified page.

Parameters

page	The page whose Cos contents are removed.

Return Value

None

Exceptions

None

Notifications

PDDocDidChangePages

Header File

PDCalls.h

Related Methods

PDPageAddCosContents

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDPageRemoveCosResource

```
void PDPageRemoveCosResource (PDPage page, char* resType,
char* resName);
```

Description

Removes a Cos resource from a page object. See Section 3.7.2 in the *PDF Reference* for a description of page resources.

Parameters

page	The page whose Cos resources are removed.
resType	Resource type. The named resource types in PDF are: **ProcSet**, **Font**, **XObject**, **ColorSpace**, **Extended graphics state**, **Pattern**, and **Property list.**
resName	Resource name. For example, the name of a font might be **F1**.

Return Value

None

Exceptions

None

Notifications

PDDocDidChangePages

Header File

PDCalls.h

Related Methods

PDPageAddCosResource
PDPageGetCosResources

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDPageResumePDEContentChanged

```
void PDPageResumePDEContentChanged (PDPage page);
```

Description

Resumes destruction of **PDEContent** objects when a **PDPageContentsDidChange** notification occurs. Only use this API if you called **PDPageSuspendPDEContentChanged**.

Parameters

page	The page whose content is changed.

Return Value

None

Exceptions

None

Notifications

None

Header File

PgCntProcs.h

Related Methods

PDPageSuspendPDEContentChanged

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDPageSetBox

```
void PDPageSetBox (PDPage page, ASAtom boxName,
ASFixedRect *box);
```

Description

Sets the box specified by **boxName** for the page.

Parameters

page	The page for which the box is to be set.
boxName	An **ASAtom** representing the type of box. Box names are: **ArtBox**, **BleedBox**, **CropBox**, **TrimBox**, or **MediaBox**.
box	An **ASFixedRect** specifying the coordinates to set for the box.

Return Value

None

Exceptions

Numerous

Notifications

PDDocWillChangePages
PDDocDidChangePages

Header File

PDCalls.h

Related Methods

PDPageGetBox

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDPageSetCropBox

```
void PDPageSetCropBox (PDPage page, ASFixedRect cropBox);
```

Description

Sets the crop box for a page. The crop box is the region of the page to display and print. This method ignores the request if either the width or height of cropBox is less than 72 points (one inch).

Parameters

page	The page whose crop box is being set.
cropBox	Rectangle specifying the page's crop box, specified in user space coordinates.

Return Value

None

Exceptions

None

Notifications

PDDocWillChangePages
PDDocDidChangePages

Header File

PDCalls.h

Related Methods

PDPageGetCropBox
PDPageSetMediaBox

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDPageSetDuration

```
void PDPageSetDuration (PDPage page, ASFixed fxDuration);
```

Description

Sets the page's automatic-advance timing value—the maximum amount of time the page is displayed before the viewer automatically advances to the next page.

Parameters

page	The page whose timing is set.
fxDuration	The auto-advance timing, in seconds. If no advance timing is desired, **fxDuration** should be set to **fxDefaultPageDuration**.

Return Value

None

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDPageGetDuration

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020002** or higher.

PDPageSetMediaBox

```
void PDPageSetMediaBox (PDPage page, ASFixedRect mediaBox);
```

Description

Sets the media box for a page. The media box is the “natural size” of the page, for example, the dimensions of an A4 sheet of paper.

Parameters

page	The page whose media box is set.
mediaBox	Rectangle specifying the page’s media box, specified in user space coordinates.

Return Value

None

Exceptions

None

Notifications

PDDocWillChangePages
PDDocDidChangePages

Header File

PDCalls.h

Related Methods

PDPageGetMediaBox
PDPageSetCropBox
PDPageGetBBox

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDPageSetPDEContent

```
ASBool PDPageSetPDEContent (PDPage page,
ExtensionID clientID);
```

Description

Sets the page's **PDEContent** back into the **PDPage**'s Cos object, using the same compression filters with which the content was previously encoded.

This method calls **PDPageNotifyContentsDidChangeEx**.

Parameters

page	The page whose **PDEContent** is set.
clientID	Identifies the caller/client. For plug-ins, this should be the **gExtensionID** extension. For the Adobe PDF Library, if there is only one client of the PDFEdit subsystem, **clientID** should be zero. If there are multiple clients, each should specify a nonzero, non-negative **clientID**. (A negative **clientID** is reserved for the implementation.)

Return Value

true if **PDEContent** successfully set, **false** otherwise.

Exceptions

None

Notifications

PDPageContentsDidChangeEx

Header File

PagePDECntCalls.h

Related Methods

PDEContentToCosObj
PDPageAcquirePDEContent
PDPageGetPDEContentFlags

Availability

Available if **PI_PAGE_PDE_CONTENT_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDPageSetPDEContentFilters

```
ASBool PDPageSetPDEContentFilters (PDPage page,
ASInt32 numFilters, ASAtom* filters);
```

Description

Sets filters used by **PDPageSetPDEContent**. The filters are not instantiated until **PDPageSetPDEContent** is called.

Parameters

page	The page whose content filters are set.
numFilters	Number of filters used by **PDPageSetPDEContent**.
filters	Array of filters to use by **PDPageSetPDEContent**.

Return Value

true if filters were set, **false** if page's contents are not cached (and so nothing was done).

Exceptions

None

Notifications

None

Header File

PagePDECntCalls.h

Related Methods

PDPageGetPDEContentFilters
PDPageSetPDEContent

Availability

Available if **PI_PAGE_PDE_CONTENT_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDPageSetPDEContentFlags

```
ASBool PDPageSetPDEContentFlags (PDPage page, ASUns32 flags);
```

Description

Sets flags used by **PDPageSetPDEContent**. The flags are not instantiated until **PDPageSetPDEContent** is called.

Parameters

page	The page whose content flags are set.
flags	**PDEContentToCosObjFlags** flags. The following flags are ignored, since content is always a page: **kPDEContentToForm** **kPDEContentToCharProc**

Return Value

true if flags were set, **false** if page's contents are not cached (and so nothing was done).

Exceptions

None

Notifications

None

Header File

PagePDECntCalls.h

Related Methods

PDPageGetPDEContentFlags
PDPageSetPDEContent

Availability

Available if **PI_PAGE_PDE_CONTENT_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDPageSetRotate

```
void PDPageSetRotate (PDPage page, PDRotate angle);
```

Description

Sets the rotation value for a page.

Parameters

page	The page whose rotation is set.

Return Value

None

Exceptions

None

Notifications

PDDocWillChangePages
PDDocDidChangePages

Header File

PDCalls.h

Related Methods

PDPageGetRotate

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDPageSetTransition

```
void PDPageSetTransition (PDPage page, PDTrans pdt);
```

Description

Sets the transition for a given page.

Parameters

page	The page whose transition is set.
pdt	The transition for the page.

Return Value

None

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDPageGetTransition
PDTransNull

Example

```
/* To remove the transition from a page, pass a NULL transition: */

PDPageSetTransition(page, PDTransNull());
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020002** or higher.

PDPageStmGetInlineImage

```
ASUns32 PDPageStmGetInlineImage (ASStm stm, ASUns32 flags,
CosDoc cosDoc, CosObj resDict, PDPageStmImageDataProc proc,
void* procClientData, ASUns32* imageRawDataStmOffsetP,
ASUns32* imageRawDataLenP, CosObj* imageDict);
```

Description

Reads a PDF page content inline image from a stream. The stream is typically obtained by getting the Cos stream for a page contents or a Form contents, and calling **CosStreamOpenStm** to open the stream using the "filtered" mode. This method is called after a **BI** token has been read from the stream. **BI** indicates that the following tokens comprise an inline image dictionary and data.

Begins reading at the current **stm** position. Returns the number of bytes read. This is the number of bytes read from the stream and indicates the amount by which the stream position has advanced.

The image attributes dictionary is returned in **imageDict**. The image data is passed to the **PDPageStmImageDataProc**; if **proc** is not provided, the image data is discarded.

imageRawDataStmOffsetP and **imageRawDataLenP** may be **NULL,** in which case they are ignored.

The caller should call **CosObjDestroy** on **imageDict** when done.

Parameters

stm	The stream from which data is read.
cosDoc	The **CosDoc** with the **PDPage** that contains the inline image.
resDict	The Resources dict in which to look up ColorSpace resources for inline images.
flags	Currently unused by this method. (Used by **PDPageStmGetToken**.)
proc	Callback method to handle inline image data.
procClientData	Client data passed to **proc**.
imageRawDataStmOffsetP	*(Filled by the method)* Offset of the data stream, after **BI**, relative to the beginning of *stm*.
imageRawDataLenP	*(Filled by the method)* Offset of the last byte of the data stream between the **BI** and **EI** PDF operators.
imageDict	*(Filled by the method)* The returned image dictionary.

Return Value

Number of bytes read from **stm**.

Exceptions

Can raise memory, I/O, and parsing exceptions.

Notifications

None

Header File

PDCalls.h

Related Methods

CosStreamOpenStm
PDPageGetBox
PDPageStmGetToken

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020002** or higher.

PDPageStmGetToken

```
ASUns32 PDPageStmGetToken (ASStm stm, ASUns32 flags,
PDPageStmStringOverflowProc proc, void* procClientData,
PDPageStmToken pageStmToken);
```

Description

Reads a PDF page content token from a stream. The stream is typically obtained by getting the Cos stream for a page contents or a Form contents, and calling **CosStreamOpenStm** to open the stream using the “filtered” mode.

It begins reading at the current stream position, and reads exactly one token. It returns the number of bytes read. This is the number of bytes read from the stream and indicates the amount by which the stream position has advanced.

If the token is an integer, real (**ASFixed**) or **ASBool**, then the value is returned in **pageStmToken.iVal**. If the token is a string or a name, the value is returned in **pageStmToken.sVal**, and the length of the token is in **pageStmToken.sValLen**. Strings are not null-terminated, but names are null-terminated. If a string length is greater than **kPDPageStmStringMax**, the **PDPageStmStringOverflowProc** is called repeatedly with portions of the string. On return from **PDPageStmGetToken**, the value of **pageStmToken.sValLen** is zero, and **pageStmToken.sVal** is empty (**ival**, **sVal** and **sValLen** are components of the **PDPageStmToken**). If there is no overflow proc, then the first **kPDPageStmStringMax** bytes of the string will be returned in **pageStmToken.sVal**, and the remaining bytes are lost. The value of **pageStmToken.sValLen** is **kPDPageStmStringMax** in this case.

If the token is **BI** (begin inline image), **PDPageStmGetInlineImage** should be called to parse the inline image.

Parameters

stm	The stm from which data is read.
flags	Bit field of options such as “skip comments” token the returned token value (set the size field before calling). **kPDPageStmSkipComments** — Skip comments during token generation.
proc	Callback method to handle long strings.
procClientData	Client data passed to the callback method.
pageStmToken	The returned token.

Return Value

Number of bytes read from **stm**.

Exceptions

Can raise memory, I/O, and parsing exceptions.

Notifications

None

Header File

PDCalls.h

Related Methods

CosStreamOpenStm
PDPageGetCosObj
PDPageStmGetInlineImage

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020002** or higher.

PDPageSuspendPDEContentChanged

```
void PDPageSuspendPDEContentChanged (PDPage page);
```

Description

Suspends destruction of **PDEContent** objects when a **PagePDEContentDidChange** notification occurs. Only use this API if you are about to call **PDPageNotifyContentsDidChange** and you do not want PDFEdit to destroy all **PDEContent** objects associated with that **PDPage**. This is used, for example, when **AVAppSetPreference** is called. Make sure to call **PDPageSuspendPDEContentChanged** on the **PDPage** object after you call **PDPageNotifyContentsDidChange**.

Parameters

page	The page whose content is changed.

Return Value

None

Exceptions

None

Notifications

None

Header File

PgCntProcs.h

Related Methods

PDPageResumePDEContentChanged

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDPageUnRegisterForPDEContentChanged

```
void PDPageUnRegisterForPDEContentChanged
(PagePDEContentDidChangeNPROTO proc, ExtensionID clientID);
```

Description

Un-registers for the **PagePDEContentDidChange** notification.

Parameters

proc	Callback for function to call when an acquired **PDPage**'s **PDEContent** has changed.
clientID	Identifies the caller/client. For plug-ins, this should be the **gExtensionID** extension. For the Adobe PDF Library, if there is only one client of the PDFEdit subsystem, **clientID** should be zero. If there are multiple clients, each should specify a nonzero, non-negative **clientID**. (A negative **clientID** is reserved for the implementation.)

Return Value

None

Exceptions

None

Notifications

PagePDEContentDidChange

Header File

PagePDECntCalls.h

Related Methods

PDPageRegisterForPDEContentChanged

Availability

Available if **PI_PAGE_PDE_CONTENT_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDPageUnRegisterForPDEContentNotCached

```
void PDPageUnRegisterForPDEContentNotCached
(PagePDEContentNotCachedNPROTO proc, ExtensionID clientID);
```

Description

Un-registers for the **PagePDEContentNotCached** notification.

Parameters

proc	Callback for function to call when an acquired **PDPage**'s **PDEContent** is no longer valid.
clientID	Identifies the caller/client. For plug-ins, this should be the **gExtensionID** extension. For the Adobe PDF Library, if there is only one client of the PDFEdit subsystem, **clientID** should be zero. If there are multiple clients, each should specify a nonzero, non-negative **clientID**. (A negative **clientID** is reserved for the implementation.)

Return Value

None

Exceptions

None

Notifications

PagePDEContentNotCached

Header File

PagePDECntCalls.h

Related Methods

PDPageRegisterForPDEContentNotCached

Availability

Available if **PI_PAGE_PDE_CONTENT_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDPageLabel

PDPageLabelEqual

```
ASBool PDPageLabelEqual (PDPageLabel pdlOne,
PDPageLabel pdlTwo);
```

Description

Compares two page labels to see if they are equivalent. Two labels are equivalent if they have the same style, starting page, and prefix strings which are the same byte-for-byte.

Parameters

pdlOne	A page label.
pdlTwo	Another page label.

Return Value

true if the two labels are valid and equivalent, **false** otherwise.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDPageLabelIsValid

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDPageLabelFromCosObj

```
PDPageLabel PDPageLabelFromCosObj (CosObj cosLabel);
```

Description

Creates a type cast of the **cosObj** to a **PDPageLabel** object.

Parameters

cosLabel	Cos object level representation of a page label.

Return Value

Page label representation of **cosLabel.**

Exceptions

Raises **pdErrBadBaseObj** if **cosLabel** is not a valid page label.

Notifications

None

Header File

PDCalls.h

Related Methods

PDPageLabelGetCosObj

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDPageLabelGetCosObj

```
CosObj PDPageLabelGetCosObj (PDPageLabel pdl);
```

Description

Creates a type cast of the page label object to a Cos object.

Parameters

pdl	A **PDPageLabel** representation of a page label.

Return Value

A **CosObj** representation of **pdl** if the page label is valid, **NULL CosObj** otherwise.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDPageLabelFromCosObj

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDPageLabelGetPrefix

```
const char*  PDPageLabelGetPrefix (PDPageLabel pgLabel,
ASInt32* prefixLen);
```

Description

Returns the prefix string for the label. The prefix string is transitory and should be copied immediately.

Parameters

pgLabel	Label for page whose prefix is desired.
prefixLen	The length, in bytes, of the prefix string. Zero if page label is not valid.

Return Value

The prefix string for the label, or **NULL** if none is specified.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDPageLabelGetStart
PDPageLabelGetStyle

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDPageLabelGetStart

```
ASInt32 PDPageLabelGetStart (PDPageLabel pgLabel);
```

Description

Gets the starting page number for the page label specified.

Parameters

pgLabel	Page label for page whose start page number is desired.

Return Value

Returns the starting number for the label. Returns **1** if the page label is not valid, or unknown.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDPageLabelGetPrefix
PDPageLabelGetStyle

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDPageLabelGetStyle

```
ASAtom PDPageLabelGetStyle (PDPageLabel pgLabel);
```

Description

Returns an **ASAtom** for the style of the label.

Parameters

pgLabel	Page label whose style is desired.

Return Value

An **ASAtom** for the label style. If no style is specified, returns **ASAtomFromString("None")**.

Exceptions

Raises an exception if storage is exhausted or file access fails.

Notifications

None

Header File

PDCalls.h

Related Methods

PDPageLabelGetPrefix
PDPageLabelGetStart

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDPageLabelIsValid

```
ASBool PDPageLabelIsValid (PDPageLabel pgLabel);
```

Description

Determines whether a page label is valid.

Parameters

pgLabel	Page label whose validity is determined.

Return Value

true if the label is valid, **false** otherwise.

Exceptions

Raises an exception if storage is exhausted or file access fails.

Notifications

None

Header File

PDCalls.h

Related Methods

PDPageLabelEqual

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDPageLabelNew

```
PDPageLabel PDPageLabelNew (PDDoc  pdDoc, ASAtom style,
const char* prefix, ASInt32 prefixLen, ASInt32 startAt);
```

Description

Constructs a new label object in the document with the specified style, prefix, and starting page number.

Parameters

pdDoc	The document that contains the new page label.
style	*(Optional)* Specifies the numbering system to use for the numeric portion of each label in this range of pages. Possible values are **D** for decimal numbers, **R** for upper-case Roman numbers, **r** for lower-case Roman numbers, **A** for upper-case alphabetic numbers, or **a** for lower-case alphabetic numbers. If this key is not present, the labels for this range will not have a numeric portion.
prefix	*(Optional)* Specifies a string to prefix to the numeric portion of the page label.
prefixLen	Length in bytes of the prefix string.
startAt	(*Optional*) Specifies the value to use when generating the numeric portion of the first label in this range. This number must be greater than or equal to 1. The default value is **1**.

Return Value

The newly-created page label.

Exceptions

Raises **pdErrBadBaseObj** if the base pages object is missing or invalid.

Notifications

None

Header File

PDCalls.h

Related Methods

PDDocRemovePageLabel
PDDocGetPageLabel

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDPath

PDPathEnum

```
void PDPathEnum (PDPath obj, PDPathEnumMonitor mon,
void* clientData);
```

Description

Enumerates the specified path's operators, calling **one of several** user-supplied callbacks for each operator. The callback that is called depends on which operator is encountered.

Parameters

obj	The path whose operators are enumerated.
mon	Pointer to a structure that contains callbacks. One of the callbacks will be called for each path segment operator in the path. Enumeration ends if any of the monitor's callbacks returns **false**.
clientData	Pointer to user-supplied data to pass to the monitor's callbacks each time one is called.

Return Value

None

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

None

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDPathGetPaintOp

```
ASInt32 PDPathGetPaintOp (PDPath obj);
```

Description

Gets flags that indicate which paint/close/clip operators are used for the specified path. For a description of the path painting operators, see Section 4.4.2 in the *PDF Reference*.

Parameters

obj	The path whose painting operators are obtained.

Return Value

A bit-wise OR of the **PDPathPaintOp** flags.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

None

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDStyle

PDStyleGetColor

```
void PDStyleGetColor (PDStyle obj, PDColorValue color);
```

Description

Gets a style's color.

Parameters

obj	The style whose color is obtained.
color	*(Filled by the method)* Pointer to a structure that contains the style's color.

Return Value

None

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDStyleGetFont
PDStyleGetFontSize

Example

```
PDColorValue theColor;

PDStyle style = PDWordGetNthCharStyle(pdWF,
     pdWord, 0);
PDStyleGetColor(style, &theColor);
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDStyleGetFont

```
PDFont PDStyleGetFont (PDStyle obj);
```

Description

Gets the specified style's font.

Parameters

obj	The style whose font is obtained.

Return Value

The font for the specified style.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDStyleGetColor
PDStyleGetFontSize

Example

```
PDStyle style = PDWordGetNthCharStyle(pdWF,
     pdWord, 0);
font = PDStyleGetFont(style);
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDStyleGetFontSize

```
ASFixed PDStyleGetFontSize (PDStyle obj);
```

Description

Get a style's font size.

Parameters

obj	The style whose font size is obtained.

Return Value

The size of the font, in points.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDStyleGetColor
PDStyleGetFont

Example

```
PDStyle style = PDWordGetNthCharStyle(pdWF,
     pdWord, 0);
size = PDStyleGetFontSize(style);
PDFontGetName(font, mbuf, sizeof(mbuf));
if(size == fixedTen && !strstr(mbuf,
     "Italic"))
{
     /* process the 10 pt. Italic */
     ...
}
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDText

PDTextEnum

```
void PDTextEnum (PDText text, PDStringEnumProc enumProc,
void* clientData);
```

Description

Enumerates the strings of a text object, calling a procedure for each string. The **PDText** object may be obtained from the **PDGraphicEnumTextProc** callback of **PDGraphicEnumMonitor**.

Parameters

text	The text object whose strings are enumerated.
enumProc	User-supplied callback to call for each text string in the text object. Enumeration ends if **enumProc** returns **false**.
clientData	Pointer to user-supplied data to pass to **enumProc** each time it is called.

Return Value

None

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

None

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDTextGetState

```
void PDTextGetState (PDText obj, PDTextStateP stateP,
ASInt32 stateLen);
```

Description

Gets the text state for a text object. See Section 5.2 in the *PDF Reference* for a discussion of the text state parameters.

Parameters

obj	The text object whose text state is obtained.
stateP	*(Filled by the method)* Pointer to a **PDTextState** structure containing the text state information.
stateLen	Must be **sizeof(PDTextState)**.

Return Value

None

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

None

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDTextAnnot

PDTextAnnotGetContents

```
ASInt32 PDTextAnnotGetContents (PDTextAnnot aTextAnnot,
char* buffer, ASInt32 bufSize);
```

Description

Gets the text of a text annotation.

NOTE: For Roman viewers, this text is always stored in the PDFDocEncoding. For non-Roman character set viewers, this text is stored as PDFDocEncoding or Unicode, depending on the file's creator. Files created in a non-Roman environment contain Unicode versions of these strings; in a Roman environment, files contain PDFDocEncoding versions of these strings.

Parameters

aTextAnnot	The text annotation whose text is obtained.
buffer	*(Filled by the method)* A buffer into which the text is placed. The text is encoded using PDFDocEncoding, and can be converted to a platform's native encoding using **PDXlateToHost** or **PDXlateToHostEx**.
bufSize	The maximum number of characters that **buffer** can hold.

Return Value

The number of characters written into **buffer**.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDTextAnnotSetContents
PDXlateToPDFDocEnc
PDXlateToPDFDocEncEx

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDTextAnnotIsOpen

```
ASBool PDTextAnnotIsOpen (PDTextAnnot aTextAnnot);
```

Description

Tests whether or not a text annotation is open.

Parameters

aTextAnnot	The text annotation whose open/closed state is obtained.

Return Value

true if the annotation is open, **false** otherwise.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDTextAnnotSetOpen

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDTextAnnotSetContents

```
void PDTextAnnotSetContents (PDTextAnnot aTextAnnot,
const char* str, ASInt32 nBytes);
```

Description

Sets the text of a text annotation.

This method also sets the modification date of the annotation to the current date and time.

NOTE: For Roman viewers, this text is always stored in the PDFDocEncoding. For non-Roman character set viewers, this text is stored as PDFDocEncoding or Unicode, depending on the file's creator. Files created in a non-Roman environment contain Unicode versions of these strings; in a Roman environment, files contain PDFDocEncoding versions of these strings.

Parameters

aTextAnnot	The text annotation whose text is set.
str	A string containing the new text. The string must be encoded using PDFDocEncoding. Strings in a platform's native encoding can be converted to PDFDocEncoding using **PDXlateToPDFDocEnc** or **PDXlateToPDFDocEncEx**.
nBytes	The number of characters in **str**.

Return Value

None

Exceptions

None

Notifications

PDAnnotWillChange
PDAnnotDidChange

Header File

PDCalls.h

Related Methods

PDTextAnnotGetContents
PDXlateToPDFDocEnc
PDXlateToPDFDocEncEx

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDTextAnnotSetOpen

```
void PDTextAnnotSetOpen (PDTextAnnot aTextAnnot,
ASBool isOpen);
```

Description

Opens or closes a text annotation.

Parameters

aTextAnnot	The annotation to open or close.
isOpen	**true** if the annotation is opened, **false** if the annotation is closed.

Return Value

None

Exceptions

None

Notifications

PDAnnotWillChange
PDAnnotDidChange

Header File

PDCalls.h

Related Methods

PDTextAnnotIsOpen

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDTextSelect

PDTextSelectCreatePageHilite

```
PDTextSelect PDTextSelectCreatePageHilite (PDPage page,
HiliteEntry* list, ASInt32 listLen);
```

Description

Creates a text selection from a page and a list of highlights specified as character offsets from the start of the page. Character offsets are a well-defined quantity in the PDF file, and are therefore stable against revisions of the word-finding algorithm, which makes them a good way to isolate yourself from changes in the algorithm.

This method does not highlight the text selection. That occurs when you pass the **PDTextSelect** returned by this method to **AVDocSetSelection**.

NOTE: As in the Acrobat viewer, the text selection is always of whole words, not part of words.

Parameters

page	The page on which the highlights appear.
list	Pointer to an array of highlight entries. If the length field of a **HiliteEntry** is **0**, the entire word is highlighted. **list** should not contain multiple instances of the same highlight; the display appearance is undefined when it does.
listLen	The number of highlight entries in **list**.

Return Value

The newly-created text selection.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

AVDocSetSelection
PDTextSelectCreateWordHilite
PDTextSelectCreateWordHiliteEx

PDTextSelectCreateRanges
PDTextSelectCreateRangesEx
PDTextSelectCreatePageHiliteEx
PDDocCreateTextSelect
PDTextSelectDestroy

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDTextSelectCreatePageHiliteEx

```
PDTextSelect PDTextSelectCreatePageHiliteEx (PDPage page,
HiliteEntry* list, ASInt32 listLen, ASInt16 WFVersion);
```

Description

Adds **WFVersion** parameter to **PDTextSelectCreatePageHilite**. Same as **PDTextSelectCreatePageHilite**, but it creates WordFinder using the specified version number. It is intended to be used by plug-ins that want to do text highlight with previous versions of the word finder algorithm.

Parameters

page	The page on which the highlights appear.
list	Pointer to an array of highlight entries. If the length field of a **HiliteEntry** is 0, the entire word is highlighted. **list** should not contain multiple instances of the same highlight; the display appearance is undefined when it does.
listLen	The number of highlight entries in **list**.
WFVersion	WordFinder version: **WF_LATEST_VERSION** —To obtain latest available version. **WF_VERSION_2**—Version used for Acrobat 3.x, 4.x. **WF_VERSION_3**—Available in Acrobat 5.0 without Accessibility enabled. Includes some improved word piecing algorithms. **WF_VERSION_4**—For Acrobat 5.0 with Accessibility enabled. Includes advanced word ordering algorithms in addition to improved word piecing algorithms.

Return Value

The newly-created text selection.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

AVDocSetSelection
PDTextSelectCreateWordHilite

PDTextSelectCreateWordHiliteEx
PDTextSelectCreatePageHilite
PDTextSelectCreateRanges
PDTextSelectCreateRangesEx
PDDocCreateTextSelect
PDTextSelectDestroy

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDTextSelectCreateRanges

```
PDTextSelect PDTextSelectCreateRanges (PDPage page,
PDTextSelectRange range, ASInt32 rangeCount);
```

Description

Creates a text selection from one or more ranges.

This method does not highlight the text selection. That occurs when you pass the **PDTextSelect** returned by this method to **AVDocSetSelection**.

Parameters

page	The page on which the text appears.
range	Pointer to an array of ranges that are used to create a text selection. Each array element is a **PDTextSelectRange** structure.
rangeCount	The number of ranges in **range**.

Return Value

A text selection created from the specified ranges.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

AVDocSetSelection
PDTextSelectCreateRangesEx
PDTextSelectCreatePageHilite
PDTextSelectCreatePageHiliteEx
PDTextSelectCreateWordHilite
PDTextSelectCreateWordHiliteEx
PDTextSelectDestroy

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDTextSelectCreateRangesEx

```
PDTextSelect PDTextSelectCreateRangesEx (PDPage page,
PDTextSelectRange range, ASInt32 rangeCount,
ASInt16 WFVersion);
```

Description

Adds the **WFVersion** parameter to **PDTextSelectCreateRanges**. Same as **PDTextSelectCreateRanges** but it creates WordFinder using specified version number. It is intended to be used by plug-ins that want to do text highlight with previous versions of the word finder algorithm.

Parameters

page	The page on which the text appears.
range	Pointer to an array of ranges that are used to create a text selection. Each array element is a **PDTextSelectRange** structure.
rangeCount	The number of ranges in **range**.
WFVersion	WordFinder version: **WF_LATEST_VERSION** —To obtain latest available version. **WF_VERSION_2**—Version used for Acrobat 3.x, 4.x. **WF_VERSION_3**—Available in Acrobat 5.0 without Accessibility enabled. Includes some improved word piecing algorithms. **WF_VERSION_4**—For Acrobat 5.0 with Accessibility enabled. Includes advanced word ordering algorithms in addition to improved word piecing algorithms.

Return Value

A text selection created from the specified ranges.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

AVDocSetSelection
PDTextSelectCreatePageHilite

PDTextSelectCreatePageHiliteEx
PDTextSelectCreateRanges
PDTextSelectCreateWordHilite
PDTextSelectCreateWordHiliteEx
PDTextSelectDestroy

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDTextSelectCreateWordHilite

```
PDTextSelect PDTextSelectCreateWordHilite (PDPage page,
HiliteEntry* list, ASInt32 listLen);
```

Description

Creates a text selection from a list of highlights specified as word offsets from the start of the page. Word offsets are not well-defined in PDF files, but are calculated by the word-finding algorithm. As a result, word offsets will in general differ in different versions of the word finding algorithm. If you choose to store word offsets, you must also store the version of the word-finding algorithm from which they are obtained using **PDWordFinderGetLatestAlgVersion**.

This method does not highlight the text selection. That occurs when you pass the **PDTextSelect** returned by this method to **AVDocSetSelection**.

Parameters

page	The page on which the highlights appear.
list	Pointer to an array of highlight entries. **list** should not contain multiple instances of the same highlight; the display appearance is undefined when it does.
listLen	The number of highlight entries in **list**.

Return Value

The newly-created text selection.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

AVDocSetSelection
PDTextSelectCreateRanges
PDTextSelectCreateRangesEx
PDTextSelectCreatePageHilite
PDTextSelectCreatePageHiliteEx
PDTextSelectCreateWordHiliteEx
PDWordFinderGetLatestAlgVersion

PDTextSelectDestroy

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDTextSelectCreateWordHiliteEx

```
PDTextSelect PDTextSelectCreateWordHiliteEx (PDPage page,
HiliteEntry* list, ASInt32 listLen, ASInt16 WFVersion);
```

Description

Adds the **WFVersion** parameter to **PDTextSelectCreateWordHilite**.

Parameters

page	The page on which the highlights appear.
list	Pointer to an array of highlight entries. **list** should not contain multiple instances of the same highlight; the display appearance is undefined when it does.
listLen	The number of highlight entries in **list**.
WFVersion	WordFinder version: **WF_LATEST_VERSION** —To obtain latest available version. **WF_VERSION_2**—Version used for Acrobat 3.x, 4.x. **WF_VERSION_3**—Available in Acrobat 5.0 without Accessibility enabled. Includes some improved word piecing algorithms. **WF_VERSION_4**—For Acrobat 5.0 with Accessibility enabled. Includes advanced word ordering algorithms in addition to improved word piecing algorithms.

Return Value

The newly-created text selection.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

AVDocSetSelection
PDTextSelectCreateRanges
PDTextSelectCreateRangesEx
PDTextSelectCreatePageHilite
PDTextSelectCreatePageHiliteEx

PDTextSelectCreateWordHilite
PDWordFinderGetLatestAlgVersion
PDTextSelectDestroy

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDTextSelectDestroy

```
void PDTextSelectDestroy (PDTextSelect text);
```

Description

Deletes a text selection object (the text on the page remains unchanged). Do not use this method to destroy a text selection that was passed to **AVDocSetSelection**; such text selections are automatically destroyed when a new selection is made or the selection is cleared.

Parameters

text	The text selection to destroy.

Return Value

None

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDDocCreateTextSelect
PDTextSelectCreatePageHilite
PDTextSelectCreateRanges
PDTextSelectCreateWordHilite

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDTextSelectEnumQuads

```
void PDTextSelectEnumQuads (PDTextSelect text,
PDTextSelectEnumQuadProc proc, void* procObj);
```

Description

Enumerates the bounding quads in a text selection. **proc** is called for each quad. If a word is on a curve it may have a quad for each character, but it may also have two characters per quad. An upright word will have only one quad for all the characters. An upright hyphenated word will have two quads.

Parameters

text	The text selection whose bounding quads are enumerated.
proc	User-supplied callback to call for each quad. Enumeration halts if **proc** returns **false**.
procObj	User-supplied data to pass to **proc** each time it is called.

Return Value

None

Exceptions

genErrBadParm

Notifications

None

Header File

PDCalls.h

Related Methods

PDDocCreateTextSelect

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDTextSelectEnumText

```
void PDTextSelectEnumText (PDTextSelect text,
PDTextSelectEnumTextProc proc, void* procObj);
```

Description

Enumerates the strings of the specified text select object, calling a procedure for each string. A string, in this context, is the set of like-styled characters within a word. It is never larger than a single word. A word containing three styles is enumerated as three strings. There is no guaranteed correspondence between these strings and the actual show strings in the PDF file. Acrobat enumerates text in the order it appears in the PDF file, which is often not the same as the order in which a person would read the text.

Parameters

text	The text selection whose strings are enumerated.
proc	User-supplied callback to call for each string in the text object. Enumeration ends if **proc** returns **false**.
procObj	User-supplied data to pass to **proc** each time it is called.

Return Value

None

Exceptions

genErrBadParm
pdErrOpNotPermitted

Notifications

None

Header File

PDCalls.h

Related Methods

PDDocCreateTextSelect

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDTextSelectEnumTextUCS

```
void PDTextSelectEnumTextUCS (PDTextSelect textP,
PDTextSelectEnumTextProc proc, void* procData);
```

Description

Same as **PDTextSelectEnumText** except output is forced to UCS.

Parameters

textP	The text selection whose strings are enumerated.
proc	User-supplied callback to call for each string in the text object. Enumeration ends if **proc** returns **false**.
procData	User-supplied data to pass to **proc** each time it is called.

Return Value

None

Exceptions

genErrBadParm

Notifications

None

Header File

PDCalls.h

Related Methods

PDDocCreateTextSelect
PDTextSelectEnumText

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDTextSelectGetBoundingRect

```
void PDTextSelectGetBoundingRect (PDTextSelect text,
ASFixedRect* boundRectP);
```

Description

Gets a text selection's bounding rectangle. This is the smallest rectangle that completely encloses all characters in the selection.

Parameters

text	The text selection whose bounding rectangle is determined.
boundRectP	*(Filled by the method)* Pointer to the text selection's bounding rectangle, specified in user space coordinates.

Return Value

None

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDTextSelectGetPage
PDTextSelectGetRange
PDTextSelectGetRangeCount

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDTextSelectGetPage

```
ASInt32 PDTextSelectGetPage (PDTextSelect text);
```

Description

Gets the page number of a text selection's page.

Parameters

text	The text selection whose page number is obtained.

Return Value

The page number of the text selection's page.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDTextSelectGetBoundingRect
PDTextSelectGetRange
PDTextSelectGetRangeCount

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDTextSelectGetRange

```
void PDTextSelectGetRange (PDTextSelect textP, ASInt32 index,
PDTextSelectRange range);
```

Description

Extracts the range specified by **index** from a text selection. Use **PDTextSelectGetRangeCount** to determine the number of ranges in a text selection.

Parameters

textP	The text selection from which a range is extracted.
index	The index of the range to extract from **textP.**
range	*(Filled by the method)* Pointer to a structure that contains the specified range.

Return Value

None

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDTextSelectGetBoundingRect
PDTextSelectGetPage
PDTextSelectGetRangeCount

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDTextSelectGetRangeCount

```
ASInt32 PDTextSelectGetRangeCount (PDTextSelect textP);
```

Description

Gets the number of ranges in a text selection. Use **PDTextSelectGetRange** to extract a single range from a text selection.

Parameters

textP	The text selection whose range count is obtained.

Return Value

The number of ranges in the text selection.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDTextSelectGetBoundingRect
PDTextSelectGetPage
PDTextSelectGetRange

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDThread

PDThreadDestroy

```
void PDThreadDestroy (PDThread thread);
```

Description

Deletes an article thread from its document. You must call **PDDocRemoveThread** to remove the thread from the document (if it was added to one using **PDDocAddThread**) before calling **PDThreadDestroy**.

Parameters

thread	The thread to destroy.

Return Value

None

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDThreadNew
PDThreadFromCosObj
PDDocRemoveThread

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDThreadFromCosObj

```
PDThread PDThreadFromCosObj (CosObj obj);
```

Description

Gets the thread object corresponding to the specified Cos object. This method does not copy the object, but is instead the logical equivalent of a type cast.

Parameters

obj	Dictionary Cos object for the thread.

Return Value

The **PDThread** object for the thread.

Exceptions

Raises **pdErrBadThread** if the thread is not valid as defined by **PDThreadIsValid.**

Notifications

None

Header File

PDCalls.h

Related Methods

PDThreadGetCosObj

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDThreadGetCosObj

```
CosObj PDThreadGetCosObj (PDThread thread);
```

Description

Gets the Cos object corresponding to a thread. This method does not copy the object, but is instead the logical equivalent of a type cast.

Parameters

thread	The thread whose Cos object is to obtained.

Return Value

Dictionary Cos object for the thread. The contents of the dictionary can be enumerated using **CosObjEnum.** Returns a **NULL** Cos object if **PDThreadIsValid(thread**) returns **false**.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

CosObjEnum
PDThreadFromCosObj

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDThreadGetFirstBead

```
PDBead PDThreadGetFirstBead (PDThread thread);
```

Description

Gets an article thread's first bead.

Parameters

thread	The thread whose first bead is obtained.

Return Value

The thread's first bead, or a **NULL** Cos object if the thread has no beads.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDThreadSetFirstBead
PDBeadGetNext
PDBeadGetPrev

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDThreadGetInfo

```
ASInt32 PDThreadGetInfo (PDThread thread, char* infoKey,
char* buffer, ASInt32 bufSize);
```

Description

Gets the specified article thread's info.

NOTE: For Roman viewers, this text is always stored in the PDFDocEncoding. For non-Roman character set viewers, this text is stored as PDFDocEncoding or Unicode, depending on the file's creator. Files created in a non-Roman environment contain Unicode versions of these strings; in a Roman environment, files contain PDFDocEncoding versions of these strings.

Parameters

thread	The thread whose thread info is obtained.
infoKey	The key whose value is obtained.
buffer	*(Filled by the method)* The value associated with **infoKey**.
bufSize	The maximum number of characters that **buffer** can hold.

Return Value

The number of characters written into **buffer**.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDThreadSetInfo

Example

```
size = PDDocGetNumThreads(pdDoc);
if(size)
{
     for(i = 0;i<size;i++)
     {
            /* get the right thread */
            thread = PDDocGetThread(pdDoc, i);
            len = PDThreadGetInfo(thread, "Title",
                  msg, sizeof(msg));
            if(!strcmp(msg, "Contents"))
                  break;
     }
}

size = PDDocGetNumThreads(pdDoc);
if(size)
{
     for(i = 0;i<size;i++)
     {
            /* get the right thread */
            thread = PDDocGetThread(pdDoc, i);
            len = PDThreadGetInfo(thread, "Title",
                  msg, sizeof(msg));
            if(!strcmp(msg, "Contents"))
                  PDThreadSetInfo(thread, "Title",
                        "In Progress", sizeof(
                        "In Progress"));
     }
}
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDThreadIsValid

```
ASBool PDThreadIsValid (PDThread thread);
```

Description

Tests whether or not a thread is valid. This is intended only to ensure that the thread has not been deleted, not to ensure that all necessary information is present and valid.

Parameters

thread	The thread whose validity is tested.

Return Value

true if the thread is valid, **false** otherwise.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

None

Example

```
size = PDDocGetNumThreads(pdDoc);
if(size){
     for(i = 0;i<size;i++){/* get the right thread */
            thread = PDDocGetThread(pdDoc, i);
            if(!PDThreadIsValid(thread))
                  AVAlertNote("invalid thread");
     }
}
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDThreadNew

```
PDThread PDThreadNew (PDDoc aDocP);
```

Description

Creates a new article thread. Use **PDDocAddThread** to add the thread to a document.

Parameters

doc	The document in which the thread is created.

Return Value

The newly-created thread.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDThreadDestroy
PDThreadFromCosObj
PDDocAddThread

Example

```
PDThread thread = PDThreadNew(doc);
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDThreadSetFirstBead

```
void PDThreadSetFirstBead (PDThread thread,
PDBead newFirstBead);
```

Description

Sets an article thread's first bead.

Parameters

thread	The thread whose first bead is set.
newFirstBead	The bead to use as the first in **thread**.

Return Value

None

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDThreadGetFirstBead
PDBeadInsert

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDThreadSetInfo

```
void PDThreadSetInfo (PDThread thread, char* infoKey,
char* buffer, ASInt32 bufSize);
```

Description

Sets the specified article thread's info.

NOTE: For Roman viewers, this text is always stored in the PDFDocEncoding. For non-Roman character set viewers, this text is stored as PDFDocEncoding or Unicode, depending on the file's creator. Files created in a non-Roman environment contain Unicode versions of these strings; in a Roman environment, files contain PDFDocEncoding versions of these strings.

Parameters

thread	The thread whose thread info is set.
infoKey	The key whose value is set.
buffer	The value to set.
bufSize	The number of characters in **buffer**.

Return Value

None

Exceptions

None

Notifications

PDThreadDidChange

Header File

PDCalls.h

Related Methods

PDThreadGetInfo

Example

```
size = PDDocGetNumThreads(pdDoc);
if(size)
{
     for(i = 0;i<size;i++)
     {
            /* get the right thread */
            thread = PDDocGetThread(pdDoc, i);
            len = PDThreadGetInfo(thread, "Title",
                  msg, sizeof(msg));
            if(!strcmp(msg, "Contents"))
                  break;
     }
}

size = PDDocGetNumThreads(pdDoc);
if(size)
{
     for(i = 0;i<size;i++)
     {
            /* get the right thread */
            thread = PDDocGetThread(pdDoc, i);
            len = PDThreadGetInfo(thread, "Title",
                  msg, sizeof(msg));
            if(!strcmp(msg, "Contents"))
                  PDThreadSetInfo(thread, "Title",
                        "In Progress", sizeof(
                        "In Progress"));
     }
}
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDTrans

PDTransEqual

```
ASBool PDTransEqual (PDTrans pdtOne, PDTrans pdtTwo);
```

Description

Tests two transitions for equality. Two transitions are equal if and only if their Cos objects are equal (see **CosObjEqual**).

Parameters

pdtOne, pdtTwo	The transitions to test for equality.

Return Value

true if the transitions are equal, **false** otherwise.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

CosObjEqual

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020002** or higher.

PDTransFromCosObj

```
PDTrans PDTransFromCosObj (CosObj obj);
```

Description

Converts the specified dictionary Cos object to a transition and verifies that the transition is valid. This method does not copy the object but is instead the logical equivalent of a type cast.

Parameters

obj	Dictionary Cos object to convert to a transition.

Return Value

The transition corresponding to the given dictionary object, **obj**.

Exceptions

Raises **pdErrBadBaseObj** if the transition is not valid as determined by **PDTransIsValid**.

Notifications

None

Header File

PDCalls.h

Related Methods

PDTransGetCosObj
PDTransIsValid

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020002** or higher.

PDTransGetCosObj

```
CosObj PDTransGetCosObj (PDTrans pdt);
```

Description

Gets the dictionary Cos object corresponding to the transition and verifies that the transition is valid. This method does not copy the object but is the logical equivalent of a type cast.

Parameters

pdt	The transition whose Cos object is obtained.

Return Value

The dictionary Cos object corresponding to the transition. Returns the **NULL** Cos object if the transition is invalid as determined by **PDTransIsValid**.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDTransFromCosObj
PDTransIsValid

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020002** or higher.

PDTransGetDuration

```
ASFixed PDTransGetDuration (PDTrans pdt);
```

Description

Gets the duration for the given transition.

Parameters

pdt	The transition for which the duration is obtained.

Return Value

The transition duration, specified in seconds. If no duration is specified in the transition, the return value is **fxDefaultTransDuration** (1 second).

NOTE: Standard durations are
0 seconds - fast
1 second - medium
2 seconds - slow

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDTransGetSubtype

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020002** or higher.

PDTransGetSubtype

```
ASAtom PDTransGetSubtype (PDTrans pdt);
```

Description

Gets a transition's subtype.

Parameters

pdt	The transition whose subtype is obtained.

Return Value

The **ASAtom** for the transition's subtype. Can be converted to a string using **ASAtomGetString**.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDTransGetDuration

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020002** or higher.

PDTransIsValid

```
ASBool PDTransIsValid (PDTrans pdt);
```

Description

Tests whether a transition is valid, that is, the transition has not been deleted.

Parameters

pdt	The transition dictionary whose validity is tested.

Return Value

true if the transition is valid, **false** otherwise.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDTransEqual

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020002** or higher.

PDTransNew

```
PDTrans PDTransNew (PDDoc pdd, ASAtom asaSubtype,
ASFixed fxDuration);
```

Description

Creates a new transition of the specified type and duration associated with the **CosDoc** of the given **PDDoc**.

Parameters

pdd	The **PDDoc** to whose **CosDoc** the transition is added.
asaSubtype	The transition subtype to create. Must be one of the transition effects described in Section 7.3.3 in the *PDF Reference*. All implementations that support transitions are required to support these transitions at a minimum. Plug-ins can register new types or provide a new handler for an existing type.
fxDuration	The transition duration, in seconds.

Return Value

The newly-created transition.

Exceptions

Raises **pdErrBadBaseObj** if the transition is not valid as determined by **PDTransIsValid**.

Notifications

None

Header File

PDCalls.h

Related Methods

PDTransNewFromCosDoc

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020002** or higher.

PDTransNewFromCosDoc

```
PDTrans PDTransNewFromCosDoc (CosDoc cd, ASAtom asaSubtype,
ASFixed fxDuration);
```

Description

Creates a new transition of the specified type and duration associated with the given **CosDoc**.

Parameters

cd	The **CosDoc** to which the transition is added.
asaSubtype	The transition subtype to create. This subtype is returned by the **AVTransHandlerGetTypeProc** callback in **AVTransHandler**.
fxDuration	The transition duration, in seconds.

Return Value

The newly-created transition.

Exceptions

Raises **pdErrBadBaseObj** if the transition is not valid as determined by **PDTransIsValid**.

Notifications

None

Header File

PDCalls.h

Related Methods

PDTransNew

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020002** or higher.

PDTransNull

```
PDTrans PDTransNull (void);
```

Description

Gets a **NULL** transition. This can be used in conjunction with **PDTransEqual** to determine whether a transition is **NULL**.

Parameters

None

Return Value

A **NULL** transition.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDTransNew

Example

```
PDTrans trans = PDPageGetTransition(page);
if (!PDTransEqual(PDTransNull(), trans)) {
     /* Page has a transition */
}
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020002** or higher.

PDViewDest

PDViewDestCreate

```
PDViewDestination PDViewDestCreate (PDDoc doc,
PDPage initialPage, ASAtom initialFitType,
const ASFixedRectP initialRect, const ASFixed initialZoom,
ASInt32 pageNumber);
```

Description

Creates a new view destination object.

Parameters

doc	The document in which the destination is used.
initialPage	The destination page.
initialFitType	Destination fit type. Must be one of the **View Destination Fit Types**, which must be converted into an **ASAtom** with **ASAtomFromString**.
initialRect	Pointer to a **ASFixedRect** specifying the destination rectangle, specified in user space coordinates. The appropriate information will be extracted from **initialRect**, depending on **initialFitType**, to create the destination. All four of **initialRect**'s components should be set; using **PDViewDestNULL** for any components can result in incorrect results for rotated pages.
initialZoom	The zoom factor to set for the destination. Used only if **initialFitType** is **XYZ**. Use the predefined value **PDViewDestNULL** (see PDExpT.h) to indicate a **NULL** zoom factor, described in Table 7.2 in the *PDF Reference*.
pageNum	Currently unused.

Return Value

The newly-created view destination.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDViewDestFromCosObj
PDViewDestDestroy

Example

```
dstPage = PDDocAcquirePage(pdDoc, (offset +
     Pages[i].pg)-1);
dest = PDViewDestCreate(pdDoc, dstPage,
     fit, &initRect, zoom, Pages[i].pg-1);
if(PDViewDestIsValid(dest))
{
     pdAction = PDActionNewFromDest(pdDoc,
            dest, pdDoc);
     PDBookmarkSetAction(newBm, pdAction);
}
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDViewDestDestroy

```
void PDViewDestDestroy (PDViewDestination dest);
```

Description

Deletes a view destination object. Before deleting a view destination, ensure that no link or bookmark refers to it.

Parameters

dest	The view destination to destroy.

Return Value

None

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDViewDestFromCosObj
PDViewDestCreate

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDViewDestFromCosObj

```
PDViewDestination PDViewDestFromCosObj (CosObj obj);
```

Description

Converts the specified Cos object to a view destination and verifies that the view destination is valid. This method does not copy the object, but is instead the logical equivalent of a type cast.

Parameters

obj	Dictionary Cos object to convert to a view destination.

Return Value

Array Cos object for the view destination.

Exceptions

Raises **pdErrBadAction** if the destination is invalid, as determined by **PDViewDestIsValid**.

Notifications

None

Header File

PDCalls.h

Related Methods

PDViewDestGetCosObj

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDViewDestGetAttr

```
void PDViewDestGetAttr (PDViewDestination dest,
ASInt32* pageNum, ASAtom* fitType, ASFixedRectP destRect,
ASFixed* zoom);
```

Description

Gets a view destination's fit type, destination rectangle, and zoom factor. The destination must be represented by an array, which is the case for a **GoToR** action.

Parameters

dest	The view destination whose attributes are obtained.
pageNum	*(Filled by the method)* The page number of the destination's page.
fitType	*(Filled by the method)* Destination fit type. One of the values listed in **View Destination Fit Types**.
destRect	*(Filled by the method)* Pointer to a **ASFixedRect** containing the destination's rectangle, specified in user space coordinates.
zoom	*(Filled by the method)* The destination's zoom factor.

Return Value

None

Exceptions

Raises **genErrBadParm** if the destination is not represented by an array.

Notifications

None

Header File

PDCalls.h

Related Methods

PDViewDestCreate

Example

```
PDLinkAnnot pdAnnot;
PDAction oldAction;
PDViewDestination viewDest;
ASInt32 page;
ASAtom fit;
ASFixedRect destRect;
ASFixed zoom;

oldAction = PDLinkAnnotGetAction(pdAnnot);
viewDest = PDActionGetDest(oldAction);
PDViewDestGetAttr(viewDest, &page, &fit,
     &destRect, &zoom);
PDActionDestroy(oldAction);
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDViewDestGetCosObj

```
CosObj PDViewDestGetCosObj (PDViewDestination dest);
```

Description

Gets the Cos object corresponding to a view destination and verifies that the view destination is valid. This method does not copy the object, but is instead the logical equivalent of a type cast.

Parameters

dest	The view destination whose Cos object is obtained.

Return Value

Array Cos object for the view destination. The contents of the array can be enumerated using **CosObjEnum**. Returns a **NULL** Cos object if the view destination is invalid, as determined by **PDViewDestIsValid**.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDViewDestFromCosObj
PDViewDestIsValid

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDViewDestIsValid

```
ASBool PDViewDestIsValid (PDViewDestination dest);
```

Description

Tests whether or not a view destination is valid. This is intended only to ensure that the view destination has not been deleted, not to ensure that all necessary information is present and valid.

Parameters

dest	The view destination whose validity is determined.

Return Value

true if the view destination is valid, **false** otherwise.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

None

Example

```
dstPage = PDDocAcquirePage(pdDoc, (offset +
     Pages[i].pg)-1);
dest = PDViewDestCreate(pdDoc, dstPage,
     fit, &initRect, zoom, Pages[i].pg-1);
if(PDViewDestIsValid(dest))
{
     pdAction = PDActionNewFromDest(pdDoc,
           dest, pdDoc);
     PDBookmarkSetAction(newBm, pdAction);
}
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDViewDestResolve

```
PDViewDestination PDViewDestResolve(PDViewDestination dest,
PDDoc doc);
```

Description

Resolves a destination. **dest** is the value of the **D** key in an action. It can be a real destination (an array) or a name. If it is a name, look it up in **doc**'s Dests dictionary. The value found there can be a real dest (an array) or a dictionary. If it's a dictionary, look up the **D** key in that dictionary.

This method is useful for getting a **PDViewDestination** from an action, as provided by **PDActionGetDest**—since this method may not return a **PDViewDestination**.

Parameters

dest	The destination to resolve.
doc	The **PDDoc** that contains the destination.

Return Value

The resolved view destination.

Exceptions

Can raise memory, I/O, and parsing exceptions.

Notifications

None

Header File

PDCalls.h

Related Methods

PDActionGetDest

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020002** or higher.

PDWord

PDWordFilterString

```
ASBool PDWordFilterString (ASUns16* infoArray, char* cNewWord,
char* cOldWord);
```

Description

Removes leading and trailing spaces from the specified word. It also removes punctuation and soft hyphens within the word. Wildcard characters ("*" and "?") are not removed, while "," and "." are removed if and only if they are surrounded by alphanumeric characters. It also converts ligatures to their constituent characters.

The determination of which characters are alphanumeric, wildcard, punctuation, and so forth, is made by the values in **infoArray**.

Although this method seems very similar to **PDWordFilterWord**, the two methods treat letters and digits slightly differently. **PDWordFilterWord** uses the encoding info array but also does a straight character code test for any characters that have not been mapped to anything. It does this to catch letters and digits from non-standard character sets, and is necessary to avoid removing words with non-standard character sets.

PDWordFilterString, on the other hand, was designed for known character sets such as WinAnsi and Mac Roman.

For non-Roman character set viewers, this method currently supports only SHIFT-JIS encoding on a Japanese system.

Parameters

infoArray	An array specifying the type of each character in the font. Each entry in this table must be one of the **Character Type Codes**. If **infoArray** is set to **NULL**, a default table is used. For non-UNIX Roman systems, it is MacRomanEncoding in Mac OS and WinAnsiEncoding in Windows. In UNIX (except HP-UX) Roman systems, it is ISO8859-1 (ISO Latin-1); for HP-UX, it is HP-ROMAN8. See Appendix D in the *PDF Reference* for descriptions of MacRomanEncoding and WinAnsiEncoding.
cNewWord	*(Filled by the method)* The filtered word.
cOldWord	The unfiltered word. This value must be passed to the method.

Return Value

true if the string required filtering, **false** if the filtered string is the same as the unfiltered string.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDWordFilterWord

Example

```
extern ASUns16 myInfo[];
char newWord[128], oldWord[128];
PDWordFilterString(&myInfo, newWord,
     oldWord);
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDWordFilterWord

```
ASBool PDWordFilterWord (PDWord word, char* buffer,
ASInt16 bufferLen, ASInt16* newLen);
```

Description

Removes non-alphanumeric characters from the specified word and also converts ligatures to their constituent characters. The determination of which characters to remove is made by examining the flags in the **outEncInfo** array passed to **PDDocCreateWordFinder**. As a result, this method is most useful after you have been called with words obtained by calling **PDWordFinderGetNthWord**, in the callback for **PDWordFinderEnumWords**, and words in the **pXYSortTable** returned by **PDWordFinderAcquireWordList**. See the description of **PDWordFilterString** for further information, and for a description of how the two methods differ.

The Acrobat Catalog program uses this method to filter words before indexing them.

This method works with non-Roman systems.

Parameters

word	The **PDWord** to filter.
buffer	*(Filled by the method)* The filtered string.
bufferLen	The maximum number of characters that **buffer** can hold.
newLen	*(Filled by the method)* Number of characters actually written into **buffer**.

Return Value

true if the word required filtering, **false** if the filtered string is the same as the unfiltered string.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDWordFilterString

Example

```
ACCB1 ASBool ACCB2
     WordCounterProc(PDWordFinder WordFinder,
     PDWord word, ASInt32 PageNum,
     void* fileNum)
{
     PDWordGetNthQuad(word, 0, &quad);
     PDWordFilterWord(word, gbuf,
            sizeof(gbuf), &len);
}
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDWordGetAttr

```
ASUns16 PDWordGetAttr (PDWord word);
```

Description

Gets a bit field containing information on the types of characters in a word. Use **PDWordGetCharacterTypes** if you wish to check each character's type individually.

Parameters

word	The word whose character types are obtained.

Return Value

A bit field containing information on the types of characters in **word**. The value is a logical OR of the **Word Attributes**.

NOTE: **PDWordGetAttr** may return an attribute value greater than the maximum of all of the public attributes since there can be private attributes added on. It is recommended to AND the result with the attribute you are interested in.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDWordGetCharacterTypes
PDWordGetStyleTransition
PDWordGetNthCharStyle

Example

```
attr = PDWordGetAttr(myWord) & WXE_HAS_TRAILING_PUNC;
if(attr)
{
     /* process words with trailing punc. */
     ...
}
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDWordGetCharacterTypes

```
void PDWordGetCharacterTypes (PDWord word, ASUns16* cArr,
ASInt16 size);
```

Description

Gets the character type for each character in a word.

Parameters

word	• The word whose character types are obtained.
cArr	• *(Filled by the method)* An array of character types. This array contains one element for each character in the word. Use **PDWordGetLength** to determine the number of elements that must be in the array. Each element is the logical OR of one or more of the **Character Type Codes**. • For non-Roman character set viewers, meaningful values are returned only for Roman characters. For non-Roman characters, it returns 0, which is the same as **W_CNTL**. If the character is 2 bytes, both bytes indicate the same character type.
size	• Number of elements in **cArr**.

Return Value

None

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDWordGetAttr
PDWordGetLength

Example

```
ASUns16 ctTab[255];

attr = PDWordGetAttr(myWord);
wlen = PDWordGetLength(myWord);
if(attr & WXE_HAS_DIGIT){
     PDWordGetCharacterTypes(myWord, ctTab,
            (ASUns16)wlen);
     IsNumber = false;
     for(i=0;i<wlen;i++){
            if(!(ctTab[i] & W_DIGIT))
            break;
     }
     if(i == wlen)
            IsNumber = true;
}
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDWordGetCharDelta

```
ASUns8 PDWordGetCharDelta (PDWord word);
```

Description

Gets the difference between the word length (the number of printed characters in the word) and the PDF word length (the number of character codes in the word). For instance, if the PDF word is "*fi* (ligature) *sh*" the mapped word will be "fish". The ligature occupies only one character code, so in this case the character delta will be $3-4=-1$.

Parameters

word	The word whose character delta is obtained.

Return Value

The character delta for **word**. Cast the return value to an **ASInt8** before using.

If the **PDWord**'s character set has no ligatures, such as on a non-Roman viewer supporting Japanese, returns **0**.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDWordGetLength
PDWordGetCharOffset

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDWordGetCharOffset

```
ASUns16 PDWordGetCharOffset (PDWord word);
```

Description

Returns a word's character offset from the beginning of its page. This information, together with the character delta obtained from **PDWordGetCharDelta**, can be used to highlight a range of words on a page, using **PDTextSelectCreatePageHilite**.

Parameters

word	The word whose character offset is obtained.

Return Value

The word's character offset. On multi-byte systems, it points to the first byte.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDWordGetCharDelta
PDWordGetLength
PDTextSelectCreatePageHilite

Example

```
ACCB1 ASBool ACCB2 WordCounterProc(
     PDWordFinder WordFinder, PDWord word,
     ASInt32 PageNum, void* fileNum)
{
     ASUns32 cur;

     cur = (ASUns32) PDWordGetCharOffset(word);
     WordCnt += (cur - gLast);
     gLast = cur;
}

WordFinder = PDDocCreateWordFinder(
     CurrentPDDoc, NULL, NULL, NULL, 0,
     WXE_PDF_ORDER, NULL);
PDWordFinderEnumWords(WordFinder, PageNum,
     ASCallbackCreateProto(PDWordProc,
     &WordCounterProc),NULL);
PDWordFinderDestroy(WordFinder);
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDWordGetLength

```
ASUns8 PDWordGetLength (PDWord word);
```

Description

Gets the number of bytes in a word. This method also works on non-Roman systems.

Parameters

word	The word object whose character count is obtained.

Return Value

The number of characters in **word**.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDWordGetCharDelta
PDWordGetCharOffset

Example

```
ASUns16 ctTab[255];
attr = PDWordGetAttr(myWord);
wlen = PDWordGetLength(myWord);
if(attr & WXE_HAS_DIGIT)
{
     PDWordGetCharacterTypes(myWord, ctTab,
            (ASUns16)wlen);
     IsNumber = false;
     for(i=0;i<wlen;i++)
     {
            if(!(ctTab[i] & W_DIGIT))
                  break;
     }
     if(i == wlen)
            IsNumber = true;
}
```

Availability

Available if **`PI_PDMODEL_VERSION`** (in `PIRequir.h`) is set to **`0x00020000`** or higher.

PDWordGetNthCharStyle

```
PDStyle PDWordGetNthCharStyle (PDWordFinder wObj, PDWord word,
ASInt32 dex);
```

Description

Returns a **PDStyle** object for the n[th] style in a word.

Parameters

wObj	A word finder object.
word	The word whose n[th] style is obtained.
dex	The index of the style to obtain. The first style in a word has an index of zero.

Return Value

The n[th] style in the word. Returns **NULL** if **dex** is greater than the number of styles in the word.

Exceptions

Raises **genErrBadParm** if **dex < 0**.

Notifications

None

Header File

PDCalls.h

Related Methods

PDWordGetStyleTransition

Example

```
for(pdwPtr = pXYSortTable;size;size--)
{
     myWord = *pdwPtr++;
     PDWordGetNthQuad(myWord, 0, &quad);
     style = PDWordGetNthCharStyle(pdWF,
            myWord, 0);
}
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDWordGetNthQuad

```
ASBool PDWordGetNthQuad (PDWord word, ASInt16 nTh,
ASFixedQuad* quad);
```

Description

Gets the specified word's nth quad, specified in user space coordinates. See **PDWordGetNumQuads** for a description of a quad.

The quad's height is the height of the font's bounding box, not the height of the tallest character used in the word. The font's bounding box is determined by the glyphs in the font that extend farthest above and below the baseline; it often extends somewhat above the top of "A" and below the bottom of "y."

The quad's width is determined from the characters actually present in the word.

As an example, the quads for the words "AWAY" and "away" have the same height, but generally do not have the same width unless the font is a mono-spaced font (a font in which all characters have the same width).

Despite the names of the fields in an **ASFixedQuad** (**tl** for top left, **bl** for bottom left, and so forth) the corners of **quad** do not necessarily have these positions.

Parameters

word	The word whose nth quad is obtained.
nTh	The quad to obtain. A word's first quad has an index of zero.
quad	*(Filled by the method)* Pointer to the word's nth quad, specified in user space coordinates.

Return Value

true if the word has an nth quad, **false** otherwise.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDWordGetNumQuads

Example

```
ACCB1 ASBool ACCB2 WordCounterProc(
     PDWordFinder WordFinder, PDWord word,
     ASInt32 PageNum, void* fileNum)
{
     PDWordGetNthQuad(word, 0, &quad);
     PDWordFilterWord(word, gbuf,
            sizeof(gbuf), &len);
}
WordFinder = PDDocCreateWordFinder(
     CurrentPDDoc, NULL, NULL, NULL, 0,
     WXE_PDF_ORDER, NULL);
PDWordFinderEnumWords(WordFinder, PageNum,
     ASCallbackCreateProto(PDWordProc,
     &WordCounterProc),NULL);
PDWordFinderDestroy(WordFinder);
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDWordGetNumQuads

```
ASInt16 PDWordGetNumQuads (PDWord word);
```

Description

Gets the number of quads in a word. A quad is a quadrilateral bounding a contiguous piece of a word. Every word has at least one quad. A word has more than one quad, for example, if it is hyphenated and split across multiple lines or if the word is set on a curve rather than on a straight line.

Parameters

word	The word whose quad count is obtained.

Return Value

The number of quads in **word**.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDWordGetNthQuad

Example

```
for(pdwPtr = pXYSortTable;size;size--){
     myWord = *pdwPtr++;
     if(PDWordGetNumQuads(myWord) > 1)
            continue;
     PDWordGetNthQuad(myWord, 0, &quad);
     style = PDWordGetNthCharStyle(pdWF,
            myWord, 0);
}
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDWordGetString

```
void PDWordGetString (PDWord word, char* str, ASInt32 len);
```

Description

Gets a word's text and also converts ligatures to their constituent characters. The string to return includes any word break characters (such as space characters) that follow the word, but not any that precede the word. The characters that are treated as word breaks are defined in the **outEncInfo** parameter of **PDDocCreateWordFinder** method. Use **PDWordFilterString** to subsequently remove the word break characters. This method does *not* convert ligatures to their constituent characters, so the character codes for the ligature remain in the string.

This method produces a string in whatever encoding the **PDWord** uses, for both Roman and non-Roman systems.

Parameters

word	The word whose string is obtained.
str	*(Filled by the method)* The string. The encoding of the string is the encoding used by the **PDWordFinder** that supplied the **PDWord**. For instance, if **PDDocCreateWordFinderUCS** is used to create the word finder, **PDWordGetString** returns only Unicode. There is no way to detect Unicode strings returned by **PDWordGetString**, since there is no UCS header (FEFF) added to each string returned.
len	Length of **str**, in bytes. Up to **len** characters of **word** will be copied into **str**. If **str** is long enough, it will be null-terminated.

Return Value

None

Exceptions

Raises **genErrBadParm** if either **word** or **str** is **NULL**.

Notifications

None

Header File

PDCalls.h

Related Methods

PDWordGetLength
PDWordGetCharDelta

PDWordSplitString

Example

```
char buf[128];

PDWordGetString(myWord, buf, sizeof(buf));
attr = PDWordGetAttr(myWord);
if(attr & WXE_HAS_TRAILING_PUNC){
     buf[PDWordGetLength(myWord)-1] = 0x00;
}
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDWordGetStyleTransition

```
ASInt16 PDWordGetStyleTransition (PDWord word,
ASInt16* transTbl, ASInt16 size);
```

Description

Gets the locations of style transitions in a word. Every word has at least one style transition, at character position zero in the word.

Parameters

word	The word whose style transition list is obtained.
transTbl	*(Filled by the method)* Array of style transitions. Each element is the character offset in **word** where the style changes. The offset specifies the first character in the word that has the new style. The first character in a word has an offset of zero.
size	Number of entries that **transTbl** can hold. The word is searched only until this number of style transitions have been found.

Return Value

Number of style transition offsets copied to **transTbl**.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDWordGetNthCharStyle

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDWordIsRotated

```
ASBool PDWordIsRotated (PDWord word);
```

Description

Tests whether or not a word is rotated.

Parameters

word	The word to test.

Return Value

true if the word is rotated, **false** otherwise.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDWordGetNthQuad

Example

```
for(pdwPtr = pXYSortTable;numWords;
     numWords--)
{
     myWord = *pdwPtr++;
     if(PDWordIsRotated(myWord))
           break;
}
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDWordSplitString

```
ASUns16 PDWordSplitString (ASUns16* infoArray, char* cNewWord,
char* cOldWord, ASUns16 nMaxLen);
```

Description

Splits the specified string into words by substituting spaces for word separator characters. The list of characters considered to be word separators can be specified, or a default list can be used.

“,” and “.” are context-sensitive word separator characters. If a “,” or a “.” are surrounded by digits (for example, 654,096.345), they are not considered a word separators.

For non-Roman character set viewers, this method currently supports only SHIFT-JIS encoding on a Japanese system.

Parameters

infoArray	A character information table. It specifies each character’s type; word separator characters must be marked as **W_WORD_BREAK (see Character Type Codes)**. This table can be identical to the table to pass to **PDDocCreateWordFinder**. If **infoArray** is **NULL**, a default table is used (see **Glyph Names of Word Separators**).
cNewWord	*(Filled by the method)* Word that has been split. Word separator characters have been replaced with spaces.
cOldWord	Word to split.
nMaxLen	Number of characters that **cNewWord** can hold. Word splitting stops when **cOldWord** is completely processed or **nMaxLen** characters have been placed in **cNewWord**, whichever occurs first.

Return Value

The number of splits that occurred.

Exceptions

Raises **genErrGeneral** if **infoArray** is **NULL**, but host encoding cannot be obtained.

Notifications

None

Header File

PDCalls.h

Related Methods

PDWordGetString

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDWordFinder

PDWordFinderAcquireWordList

```
void PDWordFinderAcquireWordList (PDWordFinder wObj,
ASInt32 pgNum, PDWord* pPDWordArray, PDWord** pXYSortTable,
PDWord** rdOrderTable, ASInt32* numWords);
```

Description

Finds all words on the specified page and returns one or more tables containing the words. One table contains the words sorted in the order in which they appear in the PDF file, while the other contains the words sorted by their x– and y–coordinates on the page.

Only words within or partially within the page's crop box (see **PDPageGetCropBox**) are enumerated. Words outside the crop box are skipped.

There can be only one word list in existence at a time; plug-ins must release the previous word list, using **PDWordFinderReleaseWordList**, before creating a new one.

Use **PDWordFinderEnumWords** instead of this method if you wish to find one word at a time instead of obtaining a table containing all words on a page.

Parameters

wObj	The word finder (created using **PDDocCreateWordFinder** or **PDDocCreateWordFinderUCS**) used to acquire the word list.
pgNum	The page number for which words are found. First page is 0, not 1, as designated in Acrobat.
pPDWordArray	*(Filled by the method)* User-supplied **PDWord** variable. Acrobat will fill this in to point to an Acrobat-allocated array of **PDWord**s, which should NEVER be accessed directly. Access the acquired list through **PDWordFinderGetNthWord**. The words are ordered in PDF order; that is, the order in which they appear in the PDF file's data. This is often, but not always, the order in which a person would read the words. Use **PDWordFinderGetNthWord** to traverse this array—you cannot access this array directly. This array is always filled, regardless of the flags used in the call to **PDDocCreateWordFinder** or **PDDocCreateWordFinderUCS**.

pXYSortTable	*(Filled by the method)* Acrobat fills in this user-supplied pointer to a pointer with the location of an Acrobat-allocated array of **PDWord**s, sorted in x–y order—that is, all words on the first "line," from left to right, followed by all words on the next "line." This array is only filled if the **WXE_XY_SORT** flag was set in the call to **PDDocCreateWordFinder** or **PDDocCreateWordFinderUCS**. **PDWordFinderReleaseWordList** MUST be called to release allocated memory for this return or there will be a memory leak. As long as this parameter is non-**NULL**, the array is always filled regardless of the value of the **rdFlags** parameter in **PDDocCreateWordFinder**.
rdOrderTable	Currently unused. Pass **NULL**.
numWords	*(Filled by the method)* The number of words found on the page.

Return Value

None

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDDocCreateWordFinder
PDDocCreateWordFinderUCS
PDWordFinderReleaseWordList
PDWordFinderEnumWords
PDWordFinderGetNthWord

Example

```
#define MAX_LENGTH_WORD 128
#define BUFFER_SIZE 80

/* Create a PDWordingFinder object */
PDWordFinder pdWF =
     PDDocCreateWordFinder(pdDoc, NULL,
     NULL, NULL, 0, WXE_RD_ORDER_SORT, NULL);
PDPage thePage;
ASInt32 pgNum = 2; /* page 3 */
thePage = PDDocAcquirePage(pdDoc, pgNum);

/* Acquire a word list */
ASInt32 numWords;
PDWord wordInfo;
PDWord *pXYSortTable;
PDWordFinderAcquireWordList(pdWF, pgNum,
     &wordInfo, &pXYSortTable, NULL, &numWords);
if(numWords == 0){
     PDPageRelease(thePage);
     PDWordFinderReleaseWordList(pdWF, pgNum);
     PDWordFinderDestroy(pdWF);
     return;
}
/* Search the acquired list for a text string */
char mbuf[MAX_STYLE_NAME];
char *title = "Adobe";
PDStyle style;
PDFont font;
ASBool IsBold;
PDWord myWord;
ASFixedQuad quad;
ASFixedRect destRect;
PDWord *pdwPtr;
char subtitle[MAX_LENGTH_WORD];
if(pXYSortTable){
     for(pdwPtr = pXYSortTable;numWords;numWords--){
           myWord = *pdwPtr++;
           PDWordGetNthQuad(myWord, 0, &quad);
           style = PDWordGetNthCharStyle(pdWF,
                 myWord, 0);
           font = PDStyleGetFont(style);
           PDFontGetName(font, mbuf,
                 sizeof(mbuf));
           if(strstr(mbuf, "Bold"))
                 IsBold = TRUE;
           else
                 IsBold = FALSE;
           if(IsBold){
                 PDWordGetString(myWord, subtitle,
```

```
                        sizeof(subtitle));
                    if (strstr(title, subtitle)){
                        QuadToRect(&quad, &destRect);
                        break;
                    }
                }
            }
            PDWordFinderReleaseWordList(pdWF, pgNum);
        }
        newview = PDViewDestCreate(pdDoc, thePage,
            k_XYZ, &destRect, fixedZero, pgNum);
        PDWordFinderDestroy(pdWF);
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDWordFinderDestroy

```
void PDWordFinderDestroy (PDWordFinder wObj);
```

Description

Destroys a word finder. Use this when you are done extracting text in a file.

Parameters

wObj	The word finder to destroy.

Return Value

None

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDDocCreateWordFinder
PDDocCreateWordFinderUCS
PDDocGetWordFinder

Example

```
ACCB1 ASBool ACCB2
     WordCounterProc(
     PDWordFinder WordFinder, PDWord word,
     ASInt32 PageNum, void *fileNum)
{
     ASUns32 cur;
     cur = (ASUns32) PDWordGetCharOffset(word);
     WordCnt += (cur - gLast);
     gLast = cur;
}
WordFinder = PDDocCreateWordFinder(
     CurrentPDDoc, NULL, NULL, NULL, 0,
     WXE_PDF_ORDER, NULL);
PDWordFinderEnumWords(WordFinder, PageNum,
     ASCallbackCreateProto(PDWordProc,
     &WordCounterProc),NULL);
PDWordFinderDestroy(WordFinder);
```

Availability

Available if **`PI_PDMODEL_VERSION`** (in `PIRequir.h`) is set to **`0x00020000`** or higher.

PDWordFinderEnumWords

```
ASBool PDWordFinderEnumWords (PDWordFinder wObj,
ASInt32 PageNum, PDWordProc wordProc, void* clientData);
```

Description

Extracts words, one at a time, from the specified page or the entire document. Calls a user-supplied procedure once for each word found. If you wish to extract all text from a page at once, use **PDWordFinderAcquireWordList** instead of this method.

Only words within or partially within the page's crop box (see **PDPageGetCropBox**) are enumerated. Words outside the crop box are skipped.

Parameters

wObj	A word finder object.
pageNum	Page number from which to extract words. Pass **PDAllPages** (see PDExpT.h) to sequentially process all pages in the document.
wordProc	User-supplied callback to call once for each word found. Enumeration halts if **wordProc** returns **false**.
clientData	Pointer to user-supplied data to pass to **wordProc** each time it is called.

Return Value

true if enumeration was successfully completed.

false if enumeration was terminated because **wordProc** returned **false**.

Exceptions

Raises **genErrBadParm** if **wordProc** is **NULL**, or **pageNum** is less than zero or greater than the total number of pages in the document.
pdErrOpNotPermitted

Notifications

None

Header File

PDCalls.h

Related Methods

PDDocCreateWordFinder
PDDocCreateWordFinderUCS
PDDocGetWordFinder
PDWordFinderAcquireWordList

Example

```
ACCB1 ASBool ACCB2 WordCounterProc(
     PDWordFinder WordFinder, PDWord word,
     ASInt32 PageNum, void* fileNum)
{
     ASUns32 cur;

     cur = (ASUns32) PDWordGetCharOffset(word);
     WordCnt += (cur - gLast);
     gLast = cur;
}
WordFinder = PDDocCreateWordFinder(
     CurrentPDDoc, NULL, NULL, NULL, 0,
     WXE_PDF_ORDER, NULL);
PDWordFinderEnumWords(WordFinder, PageNum,
     ASCallbackCreateProto(PDWordProc,
     &WordCounterProc),NULL);
PDWordFinderDestroy(WordFinder);
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDWordFinderGetLatestAlgVersion

```
ASInt16 PDWordFinderGetLatestAlgVersion (PDWordFinder wObj);
```

Description

Gets the version number of the specified word finder, or the version number of the latest word finder algorithm.

Parameters

wObj	The word finder whose algorithm's version is obtained. Pass **NULL** to obtain the latest word finding algorithm version number.

Return Value

The algorithm version associated with **wObj**, or the version of the latest word finder algorithm if **wObj** is **NULL**.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDDocCreateWordFinder
PDDocCreateWordFinderUCS
PDDocGetWordFinder

Example

```
/* store this in our index file so we can
     subsequently highlight text using the
     correct algorithm version */
ASInt16 version =
     PDWordFinderGetLatestAlgVersion(
     WordFinder);
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDWordFinderGetNthWord

```
PDWord PDWordFinderGetNthWord (PDWordFinder wObj,
ASInt32 nTh);
```

Description

Gets the nth word in the word list obtained using **PDWordFinderAcquireWordList**.

Parameters

wObj	The word finder whose nth word is obtained.
nTh	The index of the word to obtain. The first word on a page has an index of zero. Words are counted in PDF order. See the description of the **wInfoP** parameter in **PDWordFinderAcquireWordList**.

Return Value

The nth word. Returns **NULL** when the end of the list is reached.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDWordFinderAcquireWordList
PDWordFinderEnumWords

Example

```
PDWord word =
     PDWordFinderGetNthWord(WordFinder, 0);
```

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDWordFinderReleaseWordList

```
void PDWordFinderReleaseWordList (PDWordFinder wObj,
ASInt32 pageNum);
```

Description

Releases the word list for a given page. Use this to release a list created by **PDWordFinderAcquireWordList** when you are done using this list.

Parameters

wObj	A word finder object.
pageNum	Number of pages for which a word list is released.

Return Value

None

Exceptions

Raises **genErrBadParm** if the list has already been released.

Notifications

None

Header File

PDCalls.h

Related Methods

PDWordFinderAcquireWordList
PDDocCreateWordFinder
PDDocCreateWordFinderUCS
PDDocGetWordFinder

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDXObject

PDXObjectEnumFilters

```
void PDXObjectEnumFilters (PDXObject obj,
PDXObjectFilterEnumProc proc, void* clientData);
```

Description

Enumerates the filters attached to an **XObject**, calling a user-supplied procedure for each filter.

Parameters

obj	The **XObject** whose filters are enumerated.
proc	User-supplied callback to call for each filter attached to the **XObject**. Enumeration ends if **proc** returns **false. proc** will not be called if there are no filters attached to the **XObject**.
clientData	Pointer to user-supplied data to pass to **proc** each time it is called.

Return Value

None

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

None

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDXObjectGetCosObj

```
CosObj PDXObjectGetCosObj (PDXObject xObj);
```

Description

Gets the Cos object associated with an **XObject**. This method does not copy the object, but is instead the logical equivalent of a type cast.

Parameters

xObj	The **XObject** whose Cos object is obtained.

Return Value

The dictionary Cos object for the **XObject**.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

None

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDXObjectGetData

```
void PDXObjectGetData (PDXObject obj,
PDGetDataProc getDataProc, void* clientData);
```

Description

Passes the data from an **XObject** to a user-supplied procedure.

Parameters

obj	The **XObject** whose data is read.
getDataProc	User-supplied callback to call with the **XObject**'s data. Enumeration ends if **getDataProc** returns **false**.
clientData	Pointer to user-supplied data to pass to **getDataProc.**

Return Value

None

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDXObjectGetDataLength

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDXObjectGetDataLength

```
ASInt32 PDXObjectGetDataLength (PDXObject xObj);
```

Description

Gets the value of the **XObject** stream's **/Length** key, which specifies the amount of data in the PDF file (that is, after all compression/encoding filters have been applied).

Parameters

xObj	The **XObject** whose data length is obtained.

Return Value

The **XObject**'s data length.

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDXObjectGetData

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to 0x00020000 or higher.

PDXObjectGetSubtype

```
ASAtom PDXObjectGetSubtype (PDXObject xObj);
```

Description

Gets the subtype of an **XObject**. Examples of subtype are Image and Form.

Parameters

xObj	The **XObject** whose subtype is obtained.

Return Value

The **ASAtom** corresponding to the **XObject**'s subtype. Can be converted into a string using **ASAtomGetCount** (only available with PDF Library SDK).

Exceptions

None

Notifications

None

Header File

PDCalls.h

Related Methods

PDXObjectGetData

Availability

Available if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDFEdit Methods

PDFEdit Methods

PDSysEncoding

PDSysFont

Dump

PDELogDump

```
void PDELogDump (PDEObjectDumpProc proc, void* clientData);
```

Description

Enumerates the internal log of **PDEObject**s. This is useful when looking for orphaned objects.

Parameters

proc	Callback to call once for each **PDEObject**.
clientData	Pointer to user-supplied data to pass to **proc** each time it is called.

Read/Write

Read

Return Value

None

Exceptions

peErrWrongPDEObjectType
peErrUnknownPDEColorSpace
genErrBadParm

Notifications

None

Header File

PERCalls.h

Related Methods

PDEObjectDump

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEObjectDump

```
void PDEObjectDump (PDEObject obj, ASInt32 levels,
PDEObjectDumpProc proc, void* clientData);
```

Description

Dumps an ASCII version of an object, its children, and their attributes. The dump contains information about each individual object. The output for child elements is indented with respect to their parents.

- The information for each object is char* — The string describing Object Type. (See **PDEObjectGetType**.)
- The number representing Object Type. (See PEExpt.h **PDEType** enum.)
- The object reference count.
- The memory location for the object.

Parameters

obj	The **PDEObject** to dump.
levels	Depth of children and attributes to dump.
proc	Callback for the dump information. It may be called more than once per object.
clientData	Pointer to user-supplied data to pass to **proc** each time it is called.

Read/Write

Read

Return Value

None

Exceptions

genErrBadParm

Notifications

None

Header File

PERCalls.h

Related Methods

PDELogDump

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEAttrEnumTable

```
void PDEAttrEnumTable (PDEAttrEnumProc enumProc,
void* clientData);
```

Description

Enumerates the table of attributes. This method enumerates the shared resource objects. It is useful when looking for orphaned attributes.

Parameters

enumProc	Callback to call for each attribute.
clientData	Pointer to user-supplied data to pass to **enumProc** each time it is called.

Read/Write

Read

Return Value

None

Exceptions

genErrBadParm

Notifications

None

Header File

PERCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

General

PDEDefaultGState

```
void PDEDefaultGState (PDEGraphicStateP stateP,
ASInt32 stateSize);
```

Description

Fills out a **PDEGraphicState** structure with the default graphic state.

NOTE: Non-**NULL** objects in the graphic state, such as the fill and stroke color spaces, have their reference counts incremented by this method. Be sure to release these non-**NULL** objects when disposing of **stateP**.

Parameters

stateP	*(Filled by the method)* Pointer to a **PDEGraphicState** structure with the default graphic state.
stateSize	Size of **PDEGraphicState**, in bytes.

Read/Write

Read

Return Value

None

Exceptions

None

Notifications

None

Header File

PERCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEEnumElements

```
void PDEEnumElements (const CosObj* contents,
const CosObj* resources, ASUns32 flags,
PDEElementEnumProc enumProc, void* enumProcClientData);
```

Description

Enumerates all the **PDEElements** in a given stream. Similar to **PDEContentCreateFromCosObj**, but provides enumeration instead of a list of elements.

If marked content is not ignored, each **PDEContainer** contains a **PDEContent** list within itself.

Parameters

contents	Cos object that is the source for the content stream. May be page contents, a Form **XObject**, a Type 3 font CharProc, or an appearance object from an annotation.
resources	The object's Resources dictionary. If the Form or Type 3 font or appearance dictionary contains a Resources dictionary, this dictionary must be passed in **resources**. Otherwise, it must be the page resources object of the page containing the Form or Type 3 font contents object.
flags	Flags from **PDEEnumElementsFlags**.
enumProc	User-supplied callback to call once for each top-level element. NOTE: The element in the enumProc may only be valid for this method. Use **PDEAcquire** if you need to hold on to the element longer than the scope of enumProc.
enumProcClientData	Pointer to user-supplied data to pass to **enumProc** each time it is called.

Read/Write

Read

Return Value

None

Exceptions

peErrWrongPDEObjectType
genErrBadParm
peErrPStackUnderflow
peErrCantGetImageDict

Notifications

None

Header File

PERCalls.h

Related Methods

PDEContentCreateFromCosObj
PDEContentGetNumElems
PDEContentGetElem

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEMergeResourcesDict

```
void PDEMergeResourcesDict (CosObj* resDictP, CosDoc cosDoc,
const CosObj* newResP);
```

Description

Merges two Resources dictionaries in the *same* **CosDoc**—you *cannot* merge two resource dictionaries from different **CosDoc**s.

Both dictionaries and what they reference must be in **cosDoc**. The objects referenced by **newResP** are appended to **resDictP**.

This method only operates on the Cos dictionaries. It assumes there are no resource name conflicts.

NOTE: Since PDFEdit resolves resource names across **PDEContent** objects, this routine is safe for using with PDFEdit methods. This method may be unsafe if you modify streams and dictionaries outside of the PDFEdit API.

This method is useful for adding form resources to page resource dictionaries. This is only necessary if creating PDF 1.1 or earlier files for use with Acrobat 2.1 or earlier. This is unnecessary if creating PDF 1.2 or later documents.

Parameters

resDictP	*(Filled by the method)* Dictionary to which **newResP** is merged. When the method completes, **resDictP** is the merged dictionary result.
cosDoc	**CosDoc** containing both dictionaries.
newResP	Dictionary to merge with **resDictP**.

Read/Write

Write

Return Value

None

Exceptions

genErrBadParm

Notifications

None

Header File

PEWCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEPurgeCache

```
void PDEPurgeCache (PDDoc doc);
```

Description

Clears the PDE Cache of this **PDDoc**. This method is only of interest to plug-ins.

NOTE: We do not recommend calling this method directly; it is provided only for backwards compatibility.

Parameters

doc	A **PDDoc** whose cache is purged.

Read/Write

Write

Return Value

None

Exceptions

None

Notifications

None

Header File

PEWCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEBeginContainer

PDEBeginContainerCreate

```
PDEBeginContainer PDEBeginContainerCreate (ASAtom atom,
CosObj* cosObjP, ASBool isInline);
```

Description

Creates a new **PDEBeginContainer** object.

Parameters

atom	The tag name for the marked-content sequence.
cosObjP	*(May be **NULL**)* A CosDict object containing the property list for the sequence.
isInline	If **true** the object will be emitted into the page content stream in-line.

Read/Write

Write

Return Value

The newly created object.

Exceptions

None

Notifications

None

Header File

PEWCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDEBeginContainerGetDict

```
ASBool PDEBeginContainerGetDict
(PDEBeginContainer pdeBeginContainer, CosObj* dictP,
ASBool* isInlineP);
```

Description

Gets the property list dictionary associated with a **PDEBeginContainer** object. The property list is stored in a Cos dictionary.

NOTE: Either **dictP** or **isInlineP** may be **NULL** is that information is not required.

Parameters

pdeBeginContainer	A **PDEBeginContainer** object.
dictP	*(Filled by the method)* The property list associated with the **PDEBeginContainer**.
isInlineP	*(Filled by the method)* If **true** the dictionary is emitted into the page content stream inline.

Read/Write

Read

Return Value

true if **dictP** points to a Cos dictionary; **false** otherwise.

Exceptions

peErrWrongPDEObjectType if **pdeBeginContainer** is null or not the right type.

Notifications

None

Header File

PERCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDEBeginContainerGetMCTag

```
ASAtom PDEBeginContainerGetMCTag
(PDEBeginContainer pdeBeginContainer);
```

Description

Gets the marked content tag associated with a **PDEBeginContainer** object.

Parameters

pdeBeginContainer	A **PDEBeginContainer** object.

Read/Write

Read

Return Value

The mark content tag.

Exceptions

peErrWrongPDEObjectType if **pdeBeginContainer** is null or not the right type.

Notifications

None

Header File

PERCalls.h

Related Methods

PDEBeginContainerSetMCTag

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDEBeginContainerSetDict

```
void PDEBeginContainerSetDict
(PDEBeginContainer pdeBeginContainer, CosObj* cosObjP,
ASBool isInline);
```

Description

Sets the property list for a **PDEBeginContainer**. The property list is passed as a Cos dictionary that can be emitted inline or referenced from the **\Properties** key in the **\Resources** dictionary of the containing page.

NOTE: If **cosObjP** is **NULL**, the property list is cleared.

Parameters

pdeBeginContainer	The **PDEBeginContainer** object.
cosObjP	*(May be **NULL**)* The Cos dictionary containing the propertly list.
isInline	If **true** the dictionary will be emitted into the page content stream inline.

Read/Write

Write

Return Value

None

Exceptions

peErrWrongPDEObjectType if **pdeBeginContainer** is null or not the right type.

Notifications

None

Header File

PEWCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDEBeginContainerSetMCTag

```
void PDEBeginContainerSetMCTag
(PDEBeginContainer pdeBeginContainer, ASAtom atom);
```

Description

Sets the marked content tag for a **PDEBeginContainer**.

Parameters

pdeBeginContainer	The **PDEBeginContainer** object.
atom	The tag name.

Read/Write

Write

Return Value

None

Exceptions

peErrWrongPDEObjectType if **pdeBeginContainer** is **NULL** or not the right type.

Notifications

None

Header File

PEWCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDEBeginGroup

PDEBeginGroupCreate

```
PDEBeginGroup PDEBeginGroupCreate ();
```

Description

Creates a new begin group object.

Parameters

None

Read/Write

Write

Return Value

The newly created object.

Exceptions

None

Notifications

None

Header File

PEWCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDEClip

PDEClipAddElem

```
void PDEClipAddElem (PDEClip clip, ASInt32 addAfterIndex,
PDEElement pdeElement);
```

Description

Adds an element to a clip path.

Parameters

clip	The clip path to which an element is added.
addAfterIndex	The index after which to add **pdeElement**. Use **kPDEBeforeFirst** to insert an element at the beginning of the clip object.
pdeElement	The element added, which may be a **PDEPath**, a **PDEText**, a **PDEContainer**, a **PDEGroup**, or a **PDEPlace** object. NOTE: This method increments the reference count of **pdeElement**.

Read/Write

Write

Return Value

None

Exceptions

peErrWrongPDEObjectType
genErrBadParm

Notifications

None

Header File

PEWCalls.h

Related Methods

PDEClipRemoveElems

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEClipCopy

```
PDEClip PDEClipCopy (PDEClip srcClip);
```

Description

Makes a deep copy of a **PDEClip** object.

Call **PDERelease** to dispose of the returned clip object when finished with it.

Parameters

srcClip	The clipping path to copy.

Read/Write

Write

Return Value

The deep copy of **srcClip**.

Exceptions

Raises if unable to allocate memory.

Notifications

None

Header File

PEWCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEClipCreate

```
PDEClip PDEClipCreate (void);
```

Description

Creates an empty clip object. This represents a clipping object that has no effect on elements that refer to it.

Call **PDERelease** to dispose of the returned clip object when finished with it.

Parameters

None

Read/Write

Write

Return Value

The newly created clip object.

Exceptions

None

Notifications

Raises if unable to allocate memory.

Header File

PEWCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEClipFlattenedEnumElems

```
ASBool PDEClipFlattenedEnumElems (PDEClip clip,
PDEClipEnumProc enumProc, void* enumProcClientData);
```

Description

For a given **PDEClip**, enumerates all of the **PDEElement**s in a flattened manner. In other words, **PDEContainer**s and **PDEGroup**s nested in the **PDEClip** will not be handed back, but any **PDEPath**s and **PDEText**s nested in them will be. Additionally, **PDEPlace** objects inside the **PDEClip** are not returned.

Parameters

clip	The **PDEClip** to enumerate.
enumProc	Called with each flattened element. Enumeration continues until all elements have been enumerated, or until **enumProc** returns **false**.
enumProcClientData	Pointer to user-supplied data to pass to **enumProc** each time it is called.

Read/Write

Read

Return Value

Returns value of **enumProc**. **true** if successful, **false** otherwise.

Exceptions

peErrWrongPDEObjectType
genErrBadParm

Notifications

None

Header File

PERCalls.h

Related Methods

PDEClipCreate
PDEClipGetElem
PDEClipGetNumElems

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEClipGetElem

```
PDEElement PDEClipGetElem (PDEClip clip, ASInt32 index);
```

Description

Gets an element from a clip object.

NOTE: This method does not change the reference count of the returned **PDEElement**.

Parameters

clip	The clip object from which an element is obtained.
index	Index of element to get from **clip**.

Read/Write

Read

Return Value

The element from the clip object.

Exceptions

peErrWrongPDEObjectType
genErrBadParm

Notifications

None

Header File

PERCalls.h

Related Methods

PDEClipGetNumElems

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEClipGetNumElems

```
ASInt32 PDEClipGetNumElems (PDEClip clip);
```

Description

Gets the number of top-level elements in a clip object. Top-level elements may be a path or char-path, a marked content container or place, or a group.

Paths are represented as **PDEPath** objects; char-paths are represented as **PDEText** objects.

Parameters

clip	The clip object to examine.

Read/Write

Read

Return Value

Number of path and charpath elements in **clip**. If **clip** contains **PDEGroups**, this method returns the top-level **PDEPath**, **PDEText**, **PDEContainer**, **PDEGroup**, or **PDEPlace** object. Use **PDEClipFlattenedEnumElems** to see only the **PDEPath** and **PDEText** objects.

NOTE: **PDEGroup** is not a persistent object. You cannot save to PDF and re-get group objects.

Exceptions

peErrWrongPDEObjectType
genErrBadParm

Notifications

None

Header File

PERCalls.h

Related Methods

PDEClipFlattenedEnumElems
PDEClipGetElem

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEClipRemoveElems

```
void PDEClipRemoveElems (PDEClip clip, ASInt32 index,
ASInt32 count);
```

Description

Removes one or more elements from a clip object.

NOTE: This method decrements the reference count of each of the elements.

Parameters

clip	The clip object from which an element is removed.
index	First element to remove.
count	Number of elements to remove.

Read/Write

Write

Return Value

None

Exceptions

peErrWrongPDEObjectType
genErrBadParm

Notifications

None

Header File

PEWCalls.h

Related Methods

PDEClipAddElem

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEColorSpace

PDEColorSpaceCreate

```
PDEColorSpace PDEColorSpaceCreate (ASAtom family,
PDEColorSpaceStruct* csStruct);
```

Description

Creates a new color space object of the specified type.

Call **PDERelease** to dispose of the returned color space object when finished with it.

Parameters

family	Supports all PDF 1.3 color spaces, which include: Device-dependent names: **DeviceCMYK**, **DeviceGray**, **DeviceN**, or **DeviceRGB**. Device-independent names: **CalGray**, **CalRGB**, **Lab**, or **ICCBased**. Special names: **Indexed**, **Pattern**, or **Separation**.
csStruct	Data for the type of color space you want to create.

Read/Write

Write

Return Value

The newly created color space object.

Exceptions

cosErrExpectedArray
genErrBadParm
peErrUnknownPDEColorSpace

Header File

PEWCalls.h

Related Methods

PDEColorSpaceCreateFromCosObj

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEColorSpaceCreateFromCosObj

```
PDEColorSpace PDEColorSpaceCreateFromCosObj
(const CosObj* cosObjP);
```

Description

Creates a new color space object from a Cos object.

Call **PDERelease** to dispose of the returned color space object when finished with it.

Parameters

cosObjP	Supports all PDF 1.3 color spaces, which include: Device-dependent names: **DeviceCMYK**, **DeviceGray**, **DeviceN**, or **DeviceRGB**. Device-independent names: **CalGray**, **CalRGB**, **Lab**, or **ICCBased**. Special names: **Indexed**, **Pattern**, or **Separation**.

Read/Write

Write

Return Value

The newly created color space object.

Exceptions

cosErrExpectedArray
genErrBadParm
peErrUnknownPDEColorSpace

Notifications

None

Header File

PEWCalls.h

Related Methods

PDEColorSpaceCreate
PDEColorSpaceCreateFromName

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEColorSpaceCreateFromName

```
PDEColorSpace PDEColorSpaceCreateFromName (ASAtom name);
```

Description

Creates a new color space object.

Call **PDERelease** to dispose of the returned color space object when finished with it.

Parameters

name	The **ASAtom** for the name of the color space created. The name must be one of the following: **DeviceCMYK**, **DeviceGray**, or **DeviceRGB**.

Read/Write

Write

Return Value

The newly created color space object.

Exceptions

cosErrExpectedName
genErrBadParm
peErrUnknownPDEColorSpace

Notifications

None

Header File

PEWCalls.h

Related Methods

PDEColorSpaceCreate
PDEColorSpaceCreateFromCosObj

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEColorSpaceGetBase

```
ASAtom PDEColorSpaceGetBase (PDEColorSpace colorSpace);
```

Description

Gets the name of the base color space. This is a helper routine for indexed color spaces.

Call this method to obtain the base color space and color values for an uncolored pattern in PDFEdit.

NOTE: The base color values are in the **color** array in the **PDEColorValue** field for stroke and fill of a **PDEGraphicState**. Or, they are in the **colorObj2** object if the base color space is **DeviceN**. To get the color values, a client gets the base color space, determines the type and number of components of the value, and looks them up in the **PDEColorValue** field.

Parameters

colorSpace	The base color space.

Read/Write

Read

Return Value

The **ASAtom** for the name of the base color space. Use **ASAtomGetString** to obtain a C string for the **ASAtom**.

Exceptions

peErrUnknownPDEColorSpace
peErrWrongPDEObjectType

Notifications

None

Header File

PERCalls.h

Related Methods

PDEColorSpaceGetBaseNumComps

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEColorSpaceGetBaseNumComps

```
ASInt32 PDEColorSpaceGetBaseNumComps
(PDEColorSpace colorSpace);
```

Description

Gets the number of components in the base color space of an indexed color space.

For example, for **[/Indexed /DeviceRGB...]**, the number of components is 3.

Parameters

colorSpace	The indexed color space.

Read/Write

Read

Return Value

Number of components in **colorSpace**.

Exceptions

peErrUnknownPDEColorSpace
peErrWrongPDEObjectType

Notifications

None

Header File

PERCalls.h

Related Methods

PDEColorSpaceGetBase
PDEColorSpaceGetNumComps

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEColorSpaceGetCosObj

```
void PDEColorSpaceGetCosObj (PDEColorSpace colorSpace,
CosObj* cosObjP);
```

Description

Gets the color space object for an image.

Use only for images. For image masks, use **PDEElementGetGState** to obtain color information.

NOTE: (For the Adobe PDF Library v1 only) If you get the **PDEColorSpace** for an inline image, then get the **CosObj** for that color space with **PDEColorSpaceGetCosObj**, this **CosObj** is limited. Cos objects that are the result of parsing inline dictionaries in the PDF page contents are a special class of Cos objects. You should never depend on these objects lasting the lifetime of the document. You should extract the information you need from the object immediately and refer to it no further in your code.

Parameters

colorSpace	The color space whose Cos object is obtained.
cosObjP	*(Filled by the method)* Cos object for the color space.

Read/Write

Read

Return Value

Cos object for **colorSpace**. Any color space that is in the Resources dictionary of the page is returned as a Cos object.

NOTE: This Cos object is subject to the warning above.

Exceptions

peErrWrongPDEObjectType

Notifications

None

Header File

PERCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEColorSpaceGetCTable

```
void PDEColorSpaceGetCTable (PDEColorSpace colorSpace,
ASUns8* colorTableP);
```

Description

Gets the component information for an indexed color space.

Parameters

colorSpace	The color space whose component information table is obtained.
colorTableP	*(Filled by the method)* The color lookup table, which is **numComps** * (**hiVal** + 1) bytes long, where **numComps** = number of components in the base **colorSpace**. Each entry in the table contains **numComps** bytes, and the table is indexed **0** to **hiVal**, where **hiVal** is the highest index in the color table. The table is indexed from 0 to **hival**, thus the table contains **hival** + 1 entries.

Read/Write

Read

Return Value

None

Exceptions

peErrUnknownPDEColorSpace
peErrWrongPDEObjectType

Notifications

None

Header File

PERCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEColorSpaceGetHiVal

```
ASInt32 PDEColorSpaceGetHiVal (PDEColorSpace colorSpace);
```

Description

Gets the highest index for the color lookup table for an indexed color space. Since the color table is indexed from zero to **hiVal**, the actual number of entries is **hiVal** + 1.

Parameters

colorSpace	An indexed color space.

Read/Write

Read

Return Value

The highest index (**hiVal**) in the color lookup table.

Exceptions

peErrUnknownPDEColorSpace

Notifications

None

Header File

PERCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEColorSpaceGetName

```
ASAtom PDEColorSpaceGetName (PDEColorSpace colorSpace);
```

Description

Gets the name of a color space object.

Parameters

colorSpace	A color space object.

Read/Write

Read

Return Value

The color space object's name. Supports all PDF 1.3 color spaces, which include:
Device-dependent names: **DeviceCMYK**, **DeviceGray**, **DeviceN**, or **DeviceRGB**.
Device-independent names: **CalGray**, **CalRGB**, **Lab**, or **ICCBased**.
Special names: **Indexed**, **Pattern**, or **Separation**.

Exceptions

peErrUnknownPDEColorSpace

Notifications

None

Header File

PERCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEColorSpaceGetNumComps

```
ASInt32 PDEColorSpaceGetNumComps (PDEColorSpace colorSpace);
```

Description

Calculates the number of components in a color space.

Parameters

colorSpace	A color space object.

Read/Write

Read

Return Value

Number of components in **colorSpace**. For:
DeviceGray, **CalGray, Separation**: Returns 1.
DeviceRGB, **CalRGB**: Returns 3.
DeviceCMYK, **Lab**: Returns 4.
DeviceN, **ICCBased**: Returns the number of components dependent on the specific color space object.
Indexed: Returns 1. Call **PDEColorSpaceGetBaseNumComps** to get the number of components in the base color space.

Exceptions

peErrUnknownPDEColorSpace
peErrWrongPDEObjectType

Notifications

None

Header File

PERCalls.h

Related Methods

PDEColorSpaceGetBaseNumComps

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEContainer

PDEContainerCreate

```
PDEContainer PDEContainerCreate (ASAtom mcTag,
CosObj* cosObjP, ASBool isInline);
```

Description

Creates a container object.

Call **PDERelease** to dispose of the returned container object when finished with it.

Parameters

mcTag	Tag name for the container.
cosObjP	Optional Marked Content dictionary for the container.
isInline	If **true**, emits container into the page content stream inline.

Read/Write

Write

Return Value

The newly created container object.

Exceptions

pdErrOpNotPermitted

Notifications

None

Header File

PEWCalls.h

Related Methods

PDEContainerGetMCTag
PDEContainerSetMCTag

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEContainerGetContent

```
PDEContent PDEContainerGetContent (PDEContainer pdeContainer);
```

Description

Gets the **PDEContent** for a **PDEContainer**.

NOTE: This method does not change the reference count of the returned **PDEContent**.

Parameters

pdeContainer	The container whose content is obtained.

Read/Write

Read

Return Value

The **PDEContent** for the **pdeContainer**.

Exceptions

pdErrOpNotPermitted
peErrWrongPDEObjectType

Notifications

None

Header File

PERCalls.h

Related Methods

PDEContainerSetContent

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEContainerGetDict

```
ASBool PDEContainerGetDict (PDEContainer pdeContainer,
CosObj* placeDictP, ASBool* isInline);
```

Description

Gets the Marked Content dictionary for a container.

Parameters

pdeContainer	A container.
placeDictP	*(Filled by the method)* Marked Content dictionary for **pdeContainer**. **NULL** if **pdeContainer** has no Marked Content dictionary.
isInline	*(Filled by the method) true* if the dictionary is inline, *false* otherwise. Undefined if *pdeContainer* has no Marked Content dictionary.

Read/Write

Read

Return Value

true if **pdeContainer** has a Marked Content dictionary, **false** otherwise.

Exceptions

peErrWrongPDEObjectType
cosErrInvalidObj

Notifications

None

Header File

PERCalls.h

Related Methods

PDEContainerSetDict

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEContainerGetMCTag

```
ASAtom PDEContainerGetMCTag (PDEContainer pdeContainer);
```

Description

Gets the Marked Content tag for a container.

Parameters

pdeContainer	A container.

Read/Write

Read

Return Value

Marked Content tag of **pdeContainer**. Returns **ASAtomNull** if **pdeContainer** has no Marked Content tag.

Exceptions

peErrWrongPDEObjectType
genErrBadParm

Notifications

None

Header File

PERCalls.h

Related Methods

PDEContainerCreate
PDEContainerSetMCTag

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEContainerGetXAPMetadata

```
ASBool PDEContainerGetXAPMetadata (PDEContainer pdeContainer,
ASText* metadataASText);
```

Description

Gets the XAP metadata associated with a **PDEContainer**.

If there is XAP metadata, it is returned as an **ASText** in the output parameter **metadataASText**. The **ASText** returned becomes the property of the client, who is free to alter or destroy it.

Parameters

pdeContainer	The container whose metadata is being retrieved.
metadataASText	*(Filled by the method)* If there is XAP metadata, it is returned as an **ASText** object in this parameter. The **ASText** object returned becomes the property of the client, who is free to alter or destroy it.

Read/Write

Read

Return Value

true exactly when the **pdeContainer** has XAP metadata.

Exceptions

pdMetadataErrBadXAP
pdMetadataErrCouldntCreateMetaXAP
peErrWrongPDEObjectType
cosErrInvalidObj

Notifications

None

Header File

PDMetaDataCalls.h

Related Methods

PDEContainerSetXAPMetadata

Availability

Available if **PI_PDMETADATA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDEContainerSetContent

```
void PDEContainerSetContent (PDEContainer pdeContainer,
PDEContent pdeContent);
```

Description

Sets the content for a container. The existing **PDEContent** is released by this method.

NOTE: This method decrements the reference count of the previous content of the container and increments the reference count of the new **PDEContent**.

Parameters

pdeContainer	A container.
pdeContent	The content of **pdeContainer**.

Read/Write

Write

Return Value

None

Exceptions

peErrWrongPDEObjectType
genErrBadParm

Notifications

None

Header File

PEWCalls.h

Related Methods

PDEContainerGetContent

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEContainerSetDict

```
void PDEContainerSetDict (PDEContainer pdeContainer,
CosObj* placeDictP, ASBool isInline);
```

Description

Changes the Marked Content dictionary for a container.

Parameters

pdeContainer	The container whose dictionary is being changed.
placeDictP	Marked Content dictionary being set into **pdeContainer**.
isInline	If **true**, the dictionary is emitted inline.

Read/Write

Write

Return Value

None

Exceptions

peErrWrongPDEObjectType
genErrBadParm

Notifications

None

Header File

PEWCalls.h

Related Methods

PDEContainerGetDict

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEContainerSetMCTag

```
void PDEContainerSetMCTag (PDEContainer pdeContainer,
ASAtom mcTag);
```

Description

Sets the Marked Content tag for a **PDEContainer**.

Parameters

pdeContainer	The container to tag.
mcTag	Marked Content tag.

Read/Write

Write

Return Value

None

Exceptions

peErrWrongPDEObjectType
genErrBadParm

Notifications

None

Header File

PEWCalls.h

Related Methods

PDEContainerCreate
PDEContainerGetMCTag

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEContainerSetXAPMetadata

```
void PDEContainerSetXAPMetadata (PDEContainer pdeContainer,
PDDoc pdDoc, ASText metadataASText);
```

Description

Sets the XAP metadata associated with a **PDEContainer**. Replaces the XAP metadata associated with **pdeContainer** with the XAP metadata stored in **metadataASText**. The contents of **metadataASText** must be well-formed XML and Resource Description Format (RDF) as defined by the W3C (see http://www.w3.org/RDF) that also forms valid XAP. **PDEContainerSetXAPMetadtata** will not destroy **metadataASText** or alter its text.

Parameters

pdeContainer	The container whose metadata is being set.
pdDoc	The document containing **pdeContainer**.
metadataASText	Well-formed XML and RDF that also forms valid XAP.

Read/Write

Write

Return Value

None

Exceptions

pdMetadataErrBadXAP
peErrWrongPDEObjectType
cosErrInvalidObj

Notifications

None

Header File

PDMetaDataCalls.h

Related Methods

PDEContainerGetXAPMetadata

Availability

Available if **PI_PDMETADATA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDEContent

PDEContentAddElem

```
void PDEContentAddElem (PDEContent pdeContent,
ASInt32 addAfterIndex, PDEElement pdeElement);
```

Description

Inserts an element into a **PDEContent**.

NOTE: This method increments the reference count of **pdeElement**.

Parameters

pdeContent	The content to which **pdeElement** is added.
addAfterIndex	Location after which **pdeElement** is added. **addAfterIndex** should be **kPDEBeforeFirst** to add to the beginning of the display list.
pdeElement	The element to add to **pdeContent**. The reference count of **pdeElement** is incremented.

Read/Write

Write

Return Value

None

Exceptions

peErrWrongPDEObjectType
genErrBadParm

Notifications

None

Header File

PEWCalls.h

Related Methods

PDEContentRemoveElem

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEContentCreate

```
PDEContent PDEContentCreate (void);
```

Description

Creates an empty content object.

NOTE: Do not use this method to create a **PDEContent** to be put into a **PDPage**. Instead, call **PDPageAcquirePDEContent**.

Call **PDERelease** to dispose of the returned content object when finished with it.

Parameters

None

Read/Write

Write

Return Value

An empty content object.

Exceptions

peErrPStackUnderflow

Notifications

None

Header File

PEWCalls.h

Related Methods

PDEContentCreateFromCosObj
PDPageAcquirePDEContent

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEContentCreateFromCosObj

```
PDEContent PDEContentCreateFromCosObj (const CosObj* contents,
const CosObj* resources);
```

Description

Creates a content object from a Cos object. This is the main method for obtaining a **PDEContent**.

Call **PDERelease** to dispose of the returned content object when finished with it.

Parameters

contents	Cos object that is the source for the content. May be a page contents, a Form **XObject**, a Type 3 font CharProc, or an appearance dictionary for an annotation.
resources	The object's Resources dictionary. If the Form or Type 3 font or appearance dictionary contains a Resources dictionary, this dictionary must be passed in **resources**. Otherwise, it must be the page resources object of the page containing the Form or Type 3 font contents object.

Read/Write

Read

Return Value

The content from the Cos object.

Exceptions

pdErrOpNotPermitted
peErrPStackUnderflow

Notifications

None

Header File

PERCalls.h

Related Methods

PDEContentCreate
PDEContentToCosObj

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEContentGetAttrs

```
void PDEContentGetAttrs (PDEContent pdeContent,
PDEContentAttrsP attrsP, ASUns32 attrsSize);
```

Description

Gets the attributes of a content.

Parameters

pdeContent	A content object.
attrsP	*(Filled by the method)* Pointer to a **PDEContentAttrs** structure containing the attributes of the content.
attrsSize	Size of the **attrsP** buffer, in bytes.

Read/Write

Read

Return Value

None

Exceptions

peErrWrongPDEObjectType

Notifications

None

Header File

PERCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEContentGetDefaultColorSpace

```
PDEColorSpace PDEContentGetDefaultColorSpace
(PDEContent pdeContent, ASAtom colorSpaceName);
```

Description

Gets a default color space from a **PDEContent**.

See Section 4.5.4 in the *PDF Reference* for more information about default color spaces.

NOTE: This method does not change the reference count of the returned **PDEColorSpace**.

Parameters

pdeContent	A content object.
colorSpaceName	An **ASAtom** for the name of the desired color space. Must be an **ASAtom** for one of **DefaultRGB**, **DefaultCMYK**, or **DefaultGray**.

Read/Write

Read

Return Value

The desired color space in **pdeContent**. Returns **NULL** if **colorSpaceName** does not correspond to a known default, such as **DefaultRGB**.

Exceptions

None

Notifications

None

Header File

PERCalls.h

Related Methods

PDEContentGetNumElems

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEContentGetElem

```
PDEElement PDEContentGetElem (PDEContent pdeContent,
ASInt32 index);
```

Description

Gets the requested element from a content.

NOTE: This method does not change the reference count of the element.

NOTE: This method does not copy the element.

Parameters

pdeContent	A content object.
index	Index of element to obtain.

Read/Write

Read

Return Value

The requested element.

Exceptions

peErrWrongPDEObjectType

Notifications

None

Header File

PERCalls.h

Related Methods

PDEContentGetNumElems

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEContentGetNumElems

```
ASInt32 PDEContentGetNumElems (PDEContent pdeContent);
```

Description

Gets the number of elements in a **PDEContent**.

Parameters

pdeContent	A content object.

Read/Write

Read

Return Value

Number of elements in **pdeContent**.

Exceptions

peErrWrongPDEObjectType

Notifications

None

Header File

PERCalls.h

Related Methods

PDEContentGetElem

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEContentGetResources

```
ASInt32 PDEContentGetResources (PDEContent pdeContent,
ASInt32 type, PDEObject* resourcesP);
```

Description

Gets the number of resources of the specified type and, optionally, pointers to the resource objects.

Parameters

pdeContent	A content object.
type	Type of resources to query or obtain: **PDEFont**, **PDEXGroup**, or **PDEColorSpace**. Must be one of **PDEContentGetResourceFlags**.
resourcesP	*(Filled by the method)* If non-**NULL**, it must point to an array of **PDEObject** pointers. On return, the array contains pointers to the requested resources. If **resourcesP** is **NULL**, only the number of resources of **type** is returned. NOTE: The object in **resourcesP** may only be valid for this method. Use **PDEAcquire** if you need to hold on to the object longer than the scope of **resourcesP**.

Read/Write

Read

Return Value

Number of resources of **type** returned in **resourcesP**.

Exceptions

peErrWrongPDEObjectType
genErrBadParm

Notifications

None

Header File

PERCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEContentRemoveElem

```
void PDEContentRemoveElem (PDEContent pdeContent,
ASInt32 index);
```

Description

Removes an element from a **PDEContent**.

NOTE: This decrements the reference count of the element removed.

Parameters

pdeContent	A content object.
index	Index in **pdeContent** of the element to remove, whose reference count is decremented.

Read/Write

Write

Return Value

None

Exceptions

peErrWrongPDEObjectType

Notifications

None

Header File

PEWCalls.h

Related Methods

PDEContentAddElem

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEContentToCosObj

```
void PDEContentToCosObj (PDEContent pdeContent, ASUns32 flags,
PDEContentAttrsP attrs, ASUns32 attrsSize, CosDoc cosDoc,
PDEFilterArrayP filtersP, CosObj* contentsP,
CosObj* resourcesP);
```

Description

This is the main method for converting a **PDEContent** into PDF contents and resources.

NOTE: Do not use this method to put a **PDEContent** into a **PDPage**. Instead, call **PDPageSetPDEContent**.

This method does not change the **PDEContent** object nor its reference count.

The caller of this function is responsible for adding the contents and the resources returned from this method to the Page Object.

Parameters

pdeContent	A content object.
flags	Flags specifying the type of object to create (page contents, form, or charproc) and how it is created. Must be one or more of **PDEContentToCosObjFlags**.
attrs	A pointer to a **PDEContentAttrs** structure that contains the appropriate form attributes or cache device/char-width attributes, and so on. If zero, no attributes are set.
attrsSize	Size of the **attrs** buffer, in bytes. Zero if **attrs** is zero.
cosDoc	Document in which the contents and resources are created.
filtersP	A pointer to a **PDEFilterArray** structure that specifies which filters to use in encoding the contents; may be **NULL**. If **filtersP** contains any **encodeParms**, they must belong to **cosDoc**.
contentsP	*(Filled by the method)* Cos object for the resulting contents in **pdeContent**.

resourcesP	*(Filled by the method)* Cos object for the resulting resources in **pdeContent**. NOTE: The client is responsible for putting the **resourcesP** dictionary into the **contentsP** stream for non-page objects. The client must do this for **XObject** Forms and appearance dictionaries in annotations. For Type 3 fonts, the resource dictionaries must be merged and put into the Type 3 font dictionary. For a page, the contents and resources must be put into the page object.

Read/Write

Write

Return Value

None

Exceptions

peErrUnknownResType
pageErrErrorParsingImage
pdErrBadResMetrics
peErrWrongPDEObjectType
peErrUnknownPDEColorSpace

Notifications

None

Header File

PEWCalls.h

Related Methods

PDEContentCreateFromCosObj

Example

```
PDEContentToCosObj( pdeContent, 0, NULL, 0, 0, dP/*CosDoc*/, 0,
&contents, &resources );

/*Get the CosObj for the page */
cosPage = PDPageGetCosObj (pdPage);
CosDictPut(cosPage, ASAtomFromString("Contents"), contents);

CosDictPut(cosPage, ASAtomFromString("Resources"), resources);
```

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEDeviceNColors

PDEDeviceNColorsCreate

```
PDEDeviceNColors PDEDeviceNColorsCreate
(ASFixed* pColorValues, ASInt32 numValues);
```

Description

Creates an object that can be used to store **n** color components when in a **DeviceN** color space.

Parameters

pColorValues	Pointer to an array of **ASFixed** values.
numValues	The length of the array.

Read/Write

Write

Return Value

An object containing values specifying a color in a **PDEDeviceNColors** color space.

Exceptions

genErrNoMemory

Notifications

None

Header File

PEWCalls.h

Related Methods

PDEDeviceNColorsGetColorValue

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEDeviceNColorsGetColorValue

```
ASFixed PDEDeviceNColorsGetColorValue
(PDEDeviceNColors colors, ASInt32 index);
```

Description

Gets the value of a color component of a **PDEDeviceNColors** color space.

Parameters

colors	A **PDEDeviceNColors** object returned by **PDEDeviceNColorsCreate**.
index	Index of the color component to return.

Read/Write

Read

Return Value

The value of the requested color component.

Exceptions

genErrBadParm

Notifications

None

Header File

PERCalls.h

Related Methods

PDEDeviceNColorsCreate

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEElement

PDEElementCopy

```
PDEElement PDEElementCopy (PDEElement pdeElement,
ASUns32 flags);
```

Description

Makes a copy of an element. The caller is responsible for releasing the copy with **PDERelease**.

Parameters

pdeElement	The element to copy.
flags	Bit field of **PDEElementCopyFlags**.

Read/Write

Write

Return Value

A copy of **pdeElement**.

Exceptions

peErrWrongPDEObjectType
genErrBadParm

Notifications

None

Header File

PEWCalls.h

Related Methods

PDEContentGetElem

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEElementGetBBox

```
void PDEElementGetBBox (PDEElement pdeElement,
ASFixedRectP bboxP);
```

Description

Gets the bounding box for an element.

The returned bounding box is guaranteed to encompass the element, but is *not* guaranteed to be the smallest box that could contain the element. For example, for an arc, **bboxP** encloses the Bezier control points—not just the curve itself.

Parameters

pdeElement	An element whose bounding box is obtained.
bboxP	*(Filled by the method)* Pointer to a **ASFixedRect** structure specifying the bounding box of **pdeElement**, specified in user space coordinates.

Read/Write

Read

Return Value

None

Exceptions

peErrWrongPDEObjectType
genErrBadParm

Notifications

PDEElementGetClip
PDEElementGetGState
PDEElementGetMatrix

Header File

PERCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEElementGetClip

```
PDEClip PDEElementGetClip (PDEElement pdeElement);
```

Description

Gets the current clip for an element.

NOTE: This method does not change the reference count of the clip object.

Parameters

pdeElement	An element whose clip is obtained. NOTE: A clip may be shared by many elements. Use care when modifying a clip. Copy it first if you want to modify the clip for a specific element.

Read/Write

Read

Return Value

Clip object for **pdeElement**.

Exceptions

peErrWrongPDEObjectType

Notifications

None

Header File

PERCalls.h

Related Methods

PDEElementGetBBox
PDEElementGetGState
PDEElementGetMatrix
PDEElementIsAtRect

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEElementGetGState

```
void PDEElementGetGState (PDEElement pdeElement,
PDEGraphicStateP stateP, ASUns32 stateSize);
```

Description

Gets the graphics state information for an element.

This method is only valid for **PDEForm**, **PDEImage**, **PDEPath**, and **PDEShading** elements.

Parameters

pdeElement	An element whose graphics state is obtained.
stateP	*(Filled by the method)* Pointer to a **PDEGraphicState** structure that contains graphics state information for **pdeElement**. This **PDEGraphicState** may contain **PDEObject**s for color spaces or an **ExtGState**. They are *not* acquired by this method. NOTE: For a **PDEImage**, only the **ExtGState** value is used for images. For indexed images, the fill color space and values are categorized in the **PDEImage** object.
stateSize	Size of the **stateP** buffer, in bytes.

Read/Write

Read

Return Value

None

Exceptions

peErrWrongPDEObjectType
genErrBadParm

Notifications

None

Header File

PERCalls.h

Related Methods

PDEElementSetGState
PDEElementGetBBox
PDEElementGetClip

PDEElementGetMatrix

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEElementGetMatrix

```
void PDEElementGetMatrix (PDEElement pdeElement,
ASFixedMatrixP matrixP);
```

Description

Gets the transformation matrix for an element.

This matrix provides the transformation from page space to user space for the element. If there is no **cm** operator (**concatmatrix**) in the page stream, the matrix is the identity matrix.

For the Adobe PDF Library v1, the element may *not* be a **PDEContainer**, a **PDEGroup**, a **PDEPlace**, or a **PDEText**.

For the Adobe PDF Library v4, the element may *not* be a **PDEText**.

Parameters

pdeElement	An element whose transformation matrix is obtained.
matrixP	*(Filled by the method)* Pointer to **ASFixedMatrix** that holds a transformation matrix for **pdeElement**. If **pdeElement** is a text object, returns the identity matrix.

Read/Write

Read

Return Value

None

Exceptions

peErrWrongPDEObjectType
genErrBadParm

Notifications

None

Header File

PERCalls.h

Related Methods

PDEElementSetMatrix
PDEElementGetBBox
PDEElementGetGState

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEElementHasGState

```
ASBool PDEElementHasGState (PDEElement pdeElement,
PDEGraphicStateP stateP, ASUns32 stateSize);
```

Description

Gets the graphics state information for an element.

Parameters

pdeElement	The PDEElement whose graphics state is to be obtained.
stateP	*(Filled by the method)* Pointer to a **PDEGraphicState** structure that contains graphics state information for **pdeElement.**
stateSize	The size of the **stateP** buffer, **sizeof(PDEGraphicState)**

Read/Write

Read

Return Value

Returns **true** if the element has a graphics state; **false** otherwise.

Exceptions

genErrBadParm

Notifications

None

Header File

PERCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDEElementIsAtPoint

```
ASBool PDEElementIsAtPoint (PDEElement elem,
ASFixedPoint point);
```

Description

Tests whether a point is on an element.

Parameters

elem	The element to test. If **PDEElement** is a **PDEText** or **PDEImage**, it uses the bounding box of the **PDEElement** to make the check. If the **PDEElement** is a **PDEPath** and it is stroked, it checks if the point is on the path. If the **PDEElement** is a **PDEPath** and it is filled, it checks if the point is in the fill area, taking into consideration whether it is filled using the non-zero winding number rule or the even-odd rule.
point	The point, specified in user space coordinates.

Read/Write

Read

Return Value

true if the point is on the element, **false** otherwise.

Exceptions

peErrWrongPDEObjectType

Notifications

None

Header File

PERCalls.h

Related Methods

PDEElementIsAtRect
PDETextIsAtPoint
PDETextIsAtRect

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEElementIsAtRect

```
ASBool PDEElementIsAtRect (PDEElement elem, ASFixedRect rect);
```

Description

Tests whether any part of a rectangle is on an element.

Parameters

elem	The element to test. If **PDEElement** is a **PDEText** or **PDEImage**, it uses the bounding box of the **PDEElement** to make the check. If the **PDEElement** is a **PDEPath** and it is stroked, it checks if the rectangle is on the path. If the **PDEElement** is a **PDEPath** and it is filled, it checks if the rectangle is in the fill area, taking into consideration whether it is filled using the non-zero winding number rule or the even-odd rule.
rect	The rectangle, specified in user space coordinates.

Read/Write

Read

Return Value

true if any part of the rectangle is on the element, **false** otherwise.

Exceptions

peErrWrongPDEObjectType

Notifications

None

Header File

PERCalls.h

Related Methods

PDEElementIsAtPoint
PDETextIsAtPoint
PDETextIsAtRect

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEElementSetClip

```
void PDEElementSetClip (PDEElement pdeElement,
PDEClip pdeClip);
```

Description

Sets the current clip for an element.

pdeElement's previous clip's reference count is decremented (if it had one), and **pdeClip**'s reference count is incremented.

Parameters

pdeElement	An element whose clip is set.
pdeClip	The clip to set for **pdeElement**.

Read/Write

Write

Return Value

None

Exceptions

peErrWrongPDEObjectType
genErrBadParm

Notifications

None

Header File

PEWCalls.h

Related Methods

PDEElementGetClip

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEElementSetGState

```
void PDEElementSetGState (PDEElement pdeElement,
PDEGraphicStateP stateP, ASUns32 stateSize);
```

Description

Sets the graphics state information for an element.

This method is valid only for **PDEForm**, **PDEImage**, **PDEPath**, and **PDEShading** elements.

NOTE: This method causes any of **stateP**'s color space or ExtGState objects to have their reference count incremented and previous graphic state objects to be decremented.

Parameters

pdeElement	An element whose graphics state is set.
stateP	Pointer to a **PDEGraphicState** structure with graphics state information to set for **pdeElement**. Any of **stateP**'s color space or **ExtGState** objects have their reference count incremented.
stateSize	Size of the **stateP** buffer, in bytes.

Read/Write

Write

Return Value

None

Exceptions

peErrWrongPDEObjectType
genErrBadParm
Will raise a **genErrBadParm** if the first parameter, **pdeElement**, doesn't have a graphics state associated with it.

Notifications

None

Header File

PEWCalls.h

Related Methods

PDEElementGetGState

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEElementSetMatrix

```
void PDEElementSetMatrix (PDEElement pdeElement,
ASFixedMatrixP matrixP);
```

Description

Sets the transformation matrix for an element.

The element may not be a **PDEContainer**, a **PDEGroup**, a **PDEPlace**, or a **PDEText**.

Parameters

pdeElement	An element whose transformation matrix is set.
matrixP	Pointer to **ASFixedMatrix** that holds the transformation matrix to set for **pdeElement**.

Read/Write

Write

Return Value

None

Exceptions

peErrWrongPDEObjectType
genErrBadParm

Notifications

None

Header File

PEWCalls.h

Related Methods

PDEElementGetMatrix

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEEndContainer

PDEEndContainerCreate

```
PDEEndContainer PDEEndContainerCreate ();
```

Description

Creates a new end container object.

Parameters

None

Read/Write

Write

Return Value

The newly created object.

Exceptions

None

Notifications

None

Header File

PEWCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDEEndGroup

PDEEndGroupCreate

```
PDEEndGroup PDEEndGroupCreate ();
```

Description

Creates a new end group object.

Read/Write

Write

Parameters

None

Return Value

The newly created object.

Exceptions

None

Notifications

None

Header File

PEWCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDEExtGState

PDEExtGStateAcquireSoftMask

```
PDESoftMask PDEExtGStateAcquireSoftMask
(PDEExtGState pdeExtGState);
```

Description

Acquires the soft mask of the extended graphic state.

Parameters

pdeExtGState	The extended graphics state object.

Read/Write

Read

Return Value

The soft mask or **NULL** if the ExtGState dictionary doesn't contain the **SMask** key.

Exceptions

peErrWrongPDEObjectType if **pdeExtGState** is **NULL** or is not of type **kPDEExtGState**.

Notifications

None

Header File

PERCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDEExtGStateCreate

```
PDEExtGState PDEExtGStateCreate (CosObj* cosObjP);
```

Description

Creates a new **PDEExtGState** from a Cos object. See Section 4.3.4 in the *PDF Reference* for more information about extended graphics states.

Call **PDERelease** to dispose of the returned **PDEExtGState** when finished with it.

Parameters

cosObjP	A Cos object for a **PDEElement**.

Read/Write

Write

Return Value

The **PDEExtGState** for **cosObjP**.

Exceptions

None

Notifications

None

Header File

PEWCalls.h

Related Methods

PDEExtGStateGetCosObj

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEExtGStateCreateNew

```
PDEExtGState PDEExtGStateCreateNew (CosDoc doc);
```

Description

Creates a new extended graphics state object.

Parameters

doc	The document the object will be used within.

Read/Write

Write

Return Value

The newly created object.

Exceptions

None

Notifications

None

Header File

PEWCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDEExtGStateGetAIS

```
ASBool PDEExtGStateGetAIS (PDEExtGState pdeExtGState);
```

Description

Returns the value of the Alpha Is Shape (AIS) member of the graphics state. If AIS is **true**, the sources of alpha are treated as shape; otherwise they are treated as opacity values. If the value is not set, the default value of **false** is returned.

Parameters

pdeExtGState	The extended graphics state object.

Read/Write

Read

Return Value

See above.

Exceptions

peErrWrongPDEObjectType

Notifications

None

Header File

PERCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDEExtGStateGetBlendMode

```
ASAtom PDEExtGStateGetBlendMode (PDEExtGState pdeExtGState);
```

Description

Returns the blend mode for the color composite for each object painted. Valid names are **Compatible**, **Normal**, **Multiply**, **Screen**, **Difference**, **Darken**, **Lighten**, **ColorDodge**, **ColorBurn**, **Exclusion**, **HardLight**, **Overlay**, **SoftLight**, **Luminosity**, **Hue**, **Saturation** and **Color**.

Parameters

pdeExtGState	The extended graphics state object.

Read/Write

Read

Return Value

If the value has not been set a value of **Compatible** is returned. See above.

Exceptions

peErrWrongPDEObjectType

Notifications

None

Header File

PERCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDEExtGStateGetCosObj

```
void PDEExtGStateGetCosObj (PDEExtGState extGState,
CosObj* cosObjP);
```

Description

Gets a Cos object for a **PDEExtGState**.

Parameters

extGState	A **PDEExtGState** whose Cos object is obtained.
cosObjP	*(Filled by the method)* Cos object for **extGState**.

Read/Write

Read

Return Value

None

Exceptions

peErrWrongPDEObjectType

Notifications

None

Header File

PERCalls.h

Related Methods

PDEExtGStateCreate

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEExtGStateGetOpacityFill

```
ASFixed PDEExtGStateGetOpacityFill
(PDEExtGState pdeExtGState);
```

Description

Returns the opacity value for painting operations other than stroking.

Parameters

pdeExtGState	The extended graphics state object.

Read/Write

Read

Return Value

Returns the value of the **/ca** key in the ExtGState dictionary. If the value is not found, the default value of **1** is returned.

Exceptions

peErrWrongPDEObjectType

Notifications

None

Header File

PERCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDEExtGStateGetOpacityStroke

```
ASFixed PDEExtGStateGetOpacityStroke
(PDEExtGState pdeExtGState);
```

Description

Returns the opacity value for stroke painting operations for paths and glyph outlines.

Parameters

pdeExtGState	The extended graphics state object.

Read/Write

Read

Return Value

Returns the value of the **/CA** key in the ExtGState dictionary. If the value is not found, the default value of **1** is returned.

Exceptions

peErrWrongPDEObjectType

Notifications

None

Header File

PERCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDEExtGStateGetOPFill

```
ASBool PDEExtGStateGetOPFill (PDEExtGState pdeExtGState);
```

Description

Returns whether overprint is enabled for painting operations other than stroking.

Parameters

pdeExtGState	The extended graphics state object.

Read/Write

Read

Return Value

Returns the value of the ***/op*** key in the ExtGState dictionary. If the value is not found, the default value of false is returned.

Exceptions

peErrWrongPDEObjectType

Notifications

None

Header File

PERCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDEExtGStateGetOPM

```
ASInt32 PDEExtGStateGetOPM (PDEExtGState pdeExtGState);
```

Description

Returns the overprint mode used by this graphics state.

Parameters

pdeExtGState	The extended graphics state object.

Read/Write

Read

Return Value

Cos integer value.

Exceptions

peErrWrongPDEObjectType

Notifications

None

Header File

PERCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDEExtGStateGetOPStroke

```
ASBool PDEExtGStateGetOPStroke (PDEExtGState pdeExtGState);
```

Description

Returns whether overprint is enabled for stroke painting operations.

Parameters

pdeExtGState	The extended graphics state object.

Read/Write

Read

Return Value

Returns the value of the **/OP** key in the ExtGState dictionary. If the value is not found, the default value of **false** is returned.

Exceptions

peErrWrongPDEObjectType

Notifications

None

Header File

PERCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDEExtGStateGetSA

```
ASBool PDEExtGStateGetSA (PDEExtGState pdeExtGState);
```

Description

Returns whether stroke adjustment is enabled in the graphics state.

Parameters

pdeExtGState	The extended graphics state object.

Read/Write

Read

Return Value

Returns the value of the **/SA** key in the ExtGState dictionary. If the value is not set, the default value of **false** is returned.

Exceptions

peErrWrongPDEObjectType

Notifications

None

Header File

PERCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDEExtGStateGetTK

```
ASBool PDEExtGStateGetTK (PDEExtGState pdeExtGState);
```

Description

Returns whether text knockout is enabled in the graphics state.

Parameters

pdeExtGState	The extended graphics state object.

Read/Write

Read

Return Value

Returns the value of the **/TK** key in the ExtGState dictionary. If the value is not found, the default value of **true** is returned.

Exceptions

peErrWrongPDEObjectType

Notifications

None

Header File

PERCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDEExtGStateHasSoftMask

```
ASBool PDEExtGStateHasSoftMask
(PDEExtGState pdeExtGState);
```

Description

Returns whether the graphics state contains a soft mask.

Parameters

pdeExtGState	The extended graphics state object.

Read/Write

Read

Return Value

Returns **true** if the ExtGState dictionary contains the **/SMask** key; otherwise **false** is returned.

Exceptions

peErrWrongPDEObjectType

Notifications

None

Header File

PERCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDEExtGStateSetAIS

```
void PDEExtGStateSetAIS (PDEExtGState pdeExtGState,
ASBool alphaIsShape);
```

Description

Specifies if the alpha is to be interpreted as a shape or opacity mask.

Parameters

pdeExtGState	The extended graphics state object.
alphaIsShape	Indicates whether the sources of alpha are to be treated as shape (**true**) or opacity (**false**). This determines the interpretation of the constant alpha (**ca** or **CA**) and soft mask (**SMask**) parameters of the graphics state, as well as a soft-mask image (**Smask** entry) of an image XObject.

Read/Write

Write

Return Value

None

Exceptions

None

Notifications

None

Header File

PEWCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDEExtGStateSetBlendMode

```
void PDEExtGStateSetBlendMode (PDEExtGState pdeExtGState,
ASAtom atom);
```

Description

Sets the blend mode for the color composites for each object painted.

Valid mode names are **Compatible**, **Normal**, **Multiply**, **Screen**, **Difference**, **Darken**, **Lighten**, **ColorDodge**, **ColorBurn**, **Exclusion**, **HardLight**, **Overlay**, **SoftLight**, **Luminosity**, **Hue**, **Saturation** and **Color**.

Parameters

pdeExtGState	The extended graphics state object.
atom	The new blend mode.

Read/Write

Write

Return Value

None

Exceptions

None

Notifications

None

Header File

PEWCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDEExtGStateSetOpacityFill

```
void PDEExtGStateSetOpacityFill (PDEExtGState pdeExtGState,
ASFixed opacity);
```

Description

Sets the opacity value for painting operations other than stroking. The value must be in the range from **0** to **1** inclusive. Corresponds to the ***/ca*** key within the ExtGState's dictionary. The value from **0** to **1** refers to a float number (not an **ASFixed** value) that should be converted to **ASFixed** using **ASFloatToFixed**.

Parameters

pdeExtGState	The extended graphics state object.
opacity	The new opacity value.

Read/Write

Write

Return Value

None

Exceptions

None

Notifications

None

Header File

PEWCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDEExtGStateSetOpacityStroke

```
void PDEExtGStateSetOpacityStroke (PDEExtGState pdeExtGState,
ASFixed opacity);
```

Description

Sets the opacity value for stroke operations. The value must be in the range from **0** to **1** inclusive. Corresponds to the /CA key within the **ExtGState**'s dictionary. The value from **0** to **1** refers to a float number (not an **ASFixed** value) that should be converted to **ASFixed** using **ASFloatToFixed**.

Parameters

pdeExtGState	The extended graphics state object.
opacity	The new opacity value.

Read/Write

Write

Return Value

None

Exceptions

None

Notifications

None

Header File

PEWCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDEExtGStateSetOPFill

```
void PDEExtGStateSetOPFill (PDEExtGState pdeExtGState,
ASBool overprint);
```

Description

Specifies if overprint is enabled for painting operations other than stroking. Corresponds to the **/op** key within the ExtGState's dictionary.

Parameters

pdeExtGState	The extended graphics state object.
overprint	Pass **true** to enable; **false** to disable.

Read/Write

Write

Return Value

None

Exceptions

None

Notifications

None

Header File

PEWCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDEExtGStateSetOPM

```
void PDEExtGStateSetOPM (PDEExtGState pdeExtGState,
ASInt32 overprintMode);
```

Description

Sets the overprint mode. Corresponds to the **/OPM** key within the **ExtGState**'s dictionary.

Parameters

pdeExtGState	The extended graphics state object.
overprintMode	Overprint mode.

Read/Write

Write

Return Value

None

Exceptions

None

Notifications

None

Header File

PEWCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDEExtGStateSetOPStroke

```
void PDEExtGStateSetOPStroke (PDEExtGState pdeExtGState,
ASBool overprint);
```

Description

Specifies if overprint is enabled for stroke operations. Corresponds to the ***/OP*** key within the ExtGState's dictionary.

Parameters

pdeExtGState	The extended graphics state object.
overprint	Pass **true** to enable; **false** to disable.

Read/Write

Write

Return Value

None

Exceptions

None

Notifications

None

Header File

PEWCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDEExtGStateSetSA

```
void PDEExtGStateSetSA (PDEExtGState pdeExtGState,
ASBool strokeAdjust);
```

Description

Specifies whether stroke adjustment is enabled in the graphics state.

Parameters

pdeExtGState	The extended graphics state object.
strokeAdjust	Pass **true** to enable; **false** to disable.

Read/Write

Write

Return Value

None

Exceptions

peErrWrongPDEObjectType

Notifications

None

Header File

PEWCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDEExtGStateSetSoftMask

```
void PDEExtGStateSetSoftMask (PDEExtGState pdeExtGState,
PDESoftMask pdeSoftMask);
```

Description

Sets the soft mask of the extended graphics state.

Parameters

pdeExtGState	The extended graphics state object.
pdeSoftMask	The soft mask object.

Read/Write

Write

Return Value

None

Exceptions

None

Notifications

None

Header File

PEWCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDEExtGStateSetTK

```
void PDEExtGStateSetTK (PDEExtGState pdeExtGState, ASBool tk);
```

Description

Specifies whether text knockout is enabled in the graphics state. This corresponds to the **/TK** key in the ExtGState's dictionary.

Parameters

pdeExtGState	The extended graphics state object.
tk	Pass **true** to enable; **false** to disable.

Read/Write

Write

Return Value

None

Exceptions

None

Notifications

None

Header File

PEWCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDEFont

PDEFontCreate

```
PDEFont PDEFontCreate (PDEFontAttrsP attrsP,
ASUns32 attrsSize, ASInt32 firstChar, ASInt32 lastChar,
ASInt16* widthsP, char** encoding, ASAtom encodingBaseName,
ASStm fontStm, ASInt32 len1, ASInt32 len2, ASInt32 len3);
```

Description

Creates a new **PDEFont** from the specified parameters.

The **PDEFont** may be represented as an embedded font (a **FontFile** entry in the font descriptor of the PDF file). To create a **PDEFont** that is stored as an embedded font, the **FontFile** stream may be passed in **fontStm**, and the **len1**, **len2**, and **len3** parameters contain the **Length1**, **Length2**, and **Length3** values of the **FontFile** stream attributes dictionary. See Section 5.8 in the *PDF Reference* for more information about embedded fonts.

The caller must close **fontStm** with **ASStmClose** after invoking **PDEFontCreate**.

Call **PDERelease** to dispose of the returned font object when finished with it.

Parameters

attrsP	Pointer to a **PDEFontAttrs** structure for the font attributes.
attrsSize	Size of the **attrsP** buffer, in bytes.
firstChar	First character index for the widths array, **widthsP**.
lastChar	Last character index for the widths array, **widthsP**.
widthsP	Pointer to widths array.
encoding	An array of 256 pointers to glyph names specifying the custom encoding. If any pointer is **NULL**, no encoding information is written for that entry.
encodingBaseName	Encoding base name if the encoding is a custom encoding. If **encoding** is **NULL**, **encodingBaseName** is used as the value of the encoding, and must be one of “WinAnsiEncoding,” “MacRomanEncoding,” or “MacExpertEncoding.” If no Encoding value is desired, use **ASAtomNull**.
fontStm	Stream with font information.

len1	Length in bytes of the ASCII portion of the Type 1 font file after it has been decoded. For other font formats, such as TrueType or CFF, only **len1** is used, and it is the size of the font.
len2	Length in bytes of the encrypted portion of the Type 1 font file after it has been decoded.
len3	Length in bytes of the portion of the Type 1 font file that contains the 512 zeros, plus the **cleartomark** operator, plus any following data.

Read/Write

Write

Return Value

The specified **PDEFont**.

Exceptions

peErrCantCreateFontSubset
peErrCantGetAttrs
peErrCantGetWidths
peErrCantEmbedFont
genErrResourceLoadFailed

Notifications

None

Header File

PEWCalls.h

Related Methods

PDEFontCreateFromCosObj
PDEFontCreateFromSysFont
PDEFontCreateFromSysFontEx
PDEFontCreateFromSysFontWithParams
PDEFontCreateWithParams

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEFontCreateFromCosObj

```
PDEFont PDEFontCreateFromCosObj (const CosObj* cosObjP);
```

Description

Creates a **PDEFont** corresponding to a Cos object of type Font.

Call **PDERelease** to dispose of the returned font object when finished with it.

Parameters

cosObjP	Cos object for which a **PDEFont** is created.

Read/Write

Write

Return Value

The **PDEFont** created from **cosObjP**.

Exceptions

peErrCantCreateFontSubset
peErrCantGetAttrs
peErrCantGetWidths
peErrCantEmbedFont
genErrBadParm
genErrResourceLoadFailed

Notifications

None

Header File

PEWCalls.h

Related Methods

PDEFontCreate
PDEFontCreateFromSysFont
PDEFontCreateFromSysFontWithParams
PDEFontCreateWithParams
PDEFontGetCosObj

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEFontCreateFromSysFont

```
PDEFont PDEFontCreateFromSysFont (PDSysFont sysFont,
ASUns32 flags);
```

Description

Gets a **PDEFont** corresponding to a font in the system.

Call **PDERelease** to dispose of the returned font object when finished with it.

The **PDEFontCreateFlags** flags **kPDEFontCreateEmbedded** and **kPDEFontWillSubset** must *both* be set in order to subset a font.

If you create a **PDEFont** that is a subset, call **PDEFontSubsetNow** on this font afterwards.

NOTE: If you have environment with no Acrobat Language kit installed, trying to acquire a **PDEFont** from the system font may raise an exception for some of the OS fonts. In other words, if you use **PDEnumSysFonts** to get the system font attributes, not all of the system fonts will necessarily be used to create the **PDEFont**.

Parameters

sysFont	A **PDSysFont** object referencing a system font.
flags	Indicates whether to embed the font and whether to subset the font. Must be one of **PDEFontCreateFlags**. If you want to subset a font, set *both* the **kPDEFontCreateEmbedded** and **kPDEFontWillSubset** flags.

Read/Write

Write

Return Value

The **PDEFont** corresponding to **sysFont**.

Exceptions

peErrCantCreateFontSubset
peErrCantGetAttrs
peErrCantGetWidths
peErrCantEmbedFont
genErrBadParm
genErrResourceLoadFailed

Notifications

None

Header File

PEWCalls.h

Related Methods

PDEFontCreate
PDEFontCreateFromCosObj
PDEFontCreateFromSysFontAndEncoding
PDEFontCreateFromSysFontWithParams
PDEnumSysFonts

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEFontCreateFromSysFontAndEncoding

```
PDEFont PDEFontCreateFromSysFontAndEncoding
(PDSysFont sysFont, PDSysEncoding sysEnc,
ASAtom useThisBaseFont, ASUns32 createFlags);
```

Description

Create a **PDEFont** from **sysFont** and **sysEnc**. If it fails, it raises an exception. User can call **PDSysFontGetCreateFlags** to see if the combination of **sysFont** and **sysEnc** makes sense.

Parameters

sysFont	A **PDSysFont** object referencing a system font.
sysEnc	A **PDSysEncoding** object.
useThisBaseFont	The base font. An exception will be raised if the base font name passed is a subset name (XXXXXX+FontName) or an empty string.
createFlags	One of the **PDEFontCreateFlags**.

Read/Write

Write

Return Value

The newly created **PDEFont** object.

Exceptions

Numerous

Notifications

None

Header File

PEWCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDEFontCreateFromSysFontEx

```
PDEFont PDEFontCreateFromSysFontEx (PDSysFont sysFont,
ASUns32 flags, ASAtom snapshotName, ASFixed* mmDesignVec);
```

Description

Creates a **PDEFont** corresponding to a font in the system.

If the font is a multiple master font, **mmDesignVector** points to the design vector, whose length must equal the number of design axes of the font.

Call **PDERelease** to dispose of the returned font object when finished with it.

The **PDEFontCreateFlags** flags **kPDEFontCreateEmbedded** and **kPDEFontWillSubset** must *both* be set in order to subset a font.

If you create a **PDEFont** that is subsetted, call **PDEFontSubsetNow** on this font afterwards.

NOTE: If you have environment with no Acrobat Language kit installed, trying to acquire a **PDEFont** from the system font may raise an exception for some of the system fonts. In other words, if you use **PDEnumSysFonts** to get the system font attributes, not all of the system fonts are necessarily used to create the **PDEFont**.

Parameters

sysFont	A **PDSysFont** object referencing a system font.
flags	Indicates whether to embed the font and whether to subset the font. Must be one of **PDEFontCreateFlags**. If you want to subset a font, set *both* the **kPDEFontCreateEmbedded** and **kPDEFontWillSubset** flags.
snapshotName	Name to be associated with this particular instantiation of the **PDEFont**.
mmDesignVec	Pointer to multiple master font design vector.

Read/Write

Write

Return Value

The **PDEFont** corresponding to **sysFont**.

Exceptions

peErrCantCreateFontSubset
peErrCantGetAttrs
peErrCantGetWidths

peErrCantEmbedFont
genErrBadParm
genErrResourceLoadFailed

Notifications

None

Header File

PEWCalls.h

Related Methods

PDEFontCreateFromCosObj
PDEFontCreateFromSysFont
PDEFontCreateFromSysFontWithParams
PDEFontCreateWithParams
PDEnumSysFonts

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEFontCreateFromSysFontWithParams

```
PDEFont PDEFontCreateFromSysFontWithParams (PDSysFont sysFont,
PDEFontCreateFromSysFontParams params);
```

Description

Used to obtain a **PDEFont** corresponding to a font in the system.

Parameters

sysFont	The system font.
params	The parameters structure.

Read/Write

Write

Return Value

The newly created **PDEFont** object.

Exceptions

peErrCantCreateFontSubset
genErrBadParm

Notifications

None

Header File

PEWCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDEFontCreateToUnicodeNow

```
void PDEFontCreateToUnicodeNow (PDEFont font, CosDoc cosDoc);
```

Description

This function creates the **/ToUnicode** table. The user can check the return value of **PDEFontGetCreateNeedFlags** to see if calling **PDEFontCreateToUnicodeNow** is needed.

Parameters

font	An object of type **PDEFont**.
cosDoc	The container document.

Read/Write

Write

Return Value

None

Exceptions

genErrBadParm
peErrWrongPDEObjectType

Notifications

None

Header File

PEWCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDEFontCreateWidthsNow

```
void PDEFontCreateWidthsNow (PDEFont font, CosDoc cosDoc);
```

Description

This function creates width entries for font. User can check the return value of **PDEFontGetCreateNeedFlags** to see if calling **PDEFontCreateWidthsNow** is needed.

Parameters

font	The font to create width entries for.
cosDoc	The container document.

Read/Write

Write

Return Value

None

Exceptions

genErrBadParm
peErrWrongPDEObjectType

Notifications

None

Header File

PEWCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEFontCreateWithParams

```
PDEFont PDEFontCreateWithParams (PDEFontCreateParams params);
```

Description

Creates a new **PDEFont** from **params**.

The **PDEFont** may be represented as an embedded font (a **FontFile** value in PDF). To create a **PDEFont** that will be stored as an embedded font, the **FontFile** stream may be passed as **fontStm**, and the **len1**, **len2**, and **len3** parameters contain the **Length1**, **Length2**, and **Length3** values of the **FontFile**. The caller must close the **fontStm** after calling this method. This method supports multi-byte fonts.

This method extends **PDEFontCreate** to support multi-byte fonts.

Call **PDERelease** to dispose of the returned font object when finished with it.

Parameters

params	Pointer to a structure containing all font parameters necessary to fully define a font.

Read/Write

Write

Return Value

A **PDEFont** object of the font described by the parameters.

Exceptions

peErrCantCreateFontSubset
peErrCantGetAttrs
peErrCantGetWidths
peErrCantEmbedFont
genErrBadParm
genErrResourceLoadFailed

Notifications

None

Header File

PEWCalls.h

Related Methods

PDEFontCreate
PDEFontCreateFromCosObj
PDEFontCreateFromSysFont
PDEFontCreateFromSysFontEx

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEFontEmbedNow

```
void PDEFontEmbedNow (PDEFont font, CosDoc cosDoc);
```

Description

This function embeds font stream. User can check the return value of **PDEFontGetCreateNeedFlags** to see if calling **PDEFontEmbedNow** is needed.

Parameters

font	The font to embed.
cosDoc	The container document.

Read/Write

Write

Return Value

None

Exceptions

genErrBadParm
peErrWrongPDEObjectType

Notifications

None

Header File

PEWCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDEFontEmbedNowDontSubset

```
void PDEFontEmbedNowDontSubset (PDEFont font, CosDoc doc);
```

Description

Embeds the given **PDEFont** inside **doc** without creating a subset. Use this method instead of **PDEFontSubsetNow** if you created **font** with the **willSubset** flag but changed your mind.

Parameters

font	The font to embed.
doc	The container document.

Read/Write

Write

Return Value

None

Exceptions

None

Notifications

None

Header File

PEWCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDEFontGetAttrs

```
void PDEFontGetAttrs (PDEFont font, PDEFontAttrsP attrsP,
ASUns32 attrsSize);
```

Description

Gets the attributes for a font object.

Parameters

font	A **PDEFont** whose attributes are found.
attrsP	*(Filled by the method)* Pointer to a **PDEFontAttrs** structure for the font attributes.
attrsSize	Size of the **attrsP** buffer, in bytes.

Read/Write

Read

Return Value

None

Exceptions

peErrCantGetAttrs
genErrBadParm
genErrResourceLoadFailed

Notifications

None

Header File

PERCalls.h

Related Methods

PDEFontGetNumCodeBytes

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEFontGetCosObj

```
void PDEFontGetCosObj (PDEFont font, CosObj* cosObjP);
```

Description

Gets a Cos object for a **PDEFont**.

Parameters

font	A **PDEFont** whose Cos object is obtained.
cosObjP	*(Filled by the method)* The Cos object corresponding to **font**.

Read/Write

Read

Return Value

None

Exceptions

genErrResourceLoadFailed
peErrWrongPDEObjectType

Notifications

None

Header File

PERCalls.h

Related Methods

PDEFontCreateFromCosObj

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEFontGetCreateNeedFlags

```
ASUns32 PDEFontGetCreateNeedFlags (PDEFont font);
```

Description

This function returns flags indicating what needs to be done to make **PDEFont** complete. **kPDEFontCreateNeedWidths** can be cleared by **PDEFontCreateWidthsNow**. **kPDEFontCreateNeedToUnicode** can be cleared by **PDEFontCreateToUnicodeNow**. **kPDEFontCreateNeedEmbed** can be cleared by **PDEFontEmbedNow**.

Parameters

font	The instance of the font.

Read/Write

Write

Return Value

A value corresponding to **PDEFontCreateNeedFlags**.

Exceptions

None

Notifications

None

Header File

PEWCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDEFontGetNumCodeBytes

```
ASInt16 PDEFontGetNumCodeBytes (PDEFont font, ASUns8* text,
ASInt32 len);
```

Description

Gets the number of bytes comprising the next code in a string of single or multi-byte character codes.

Parameters

font	A **PDEFont** object returned from one of the **PDEFontCreate** methods.
text	Pointer into a string of characters.
len	The length, in bytes, of the string of characters, starting with the character pointed to by **text**.

Read/Write

Read

Return Value

Number of bytes in the next character code pointed to by **text**.

Exceptions

genErrNoMemory

Notifications

None

Header File

PERCalls.h

Related Methods

PDEFontIsMultiByte
PDEFontSumWidths
PDEFontGetOneByteEncoding

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEFontGetOneByteEncoding

```
ASBool PDEFontGetOneByteEncoding (PDEFont font,
ASAtom* encodingDelta);
```

Description

Gets an array of delta encodings for the given one byte **PDEFont**.

Parameters

font	A **PDEFont** object returned from one of the **PDEFontCreate** methods.
encodingDelta	*(Filled by the method)* Pointer to an **ASAtom** array that is filled with the delta encodings for **font**. Each entry is the **ASAtom** for a glyph name that differs from the base encoding. See Section 5.5.5 in the *PDF Reference* for more information about font encodings. The array *must* be allocated to hold 256 entries.

Read/Write

Read

Return Value

true if **encodingDelta** is filled, **false** otherwise.

Exceptions

genErrNoMemory

Notifications

None

Header File

PERCalls.h

Related Methods

PDEFontIsMultiByte
PDEFontSumWidths
PDEFontGetNumCodeBytes

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEFontGetWidths

```
void PDEFontGetWidths (PDEFont font, ASInt16* widthsP);
```

Description

Gets the widths for a font object.

Parameters

font	A **PDEFont** whose widths are found.
widthsP	*(Filled by the method)* Pointer to widths array. **widthsP** must have room for 256 values. The widths are returned in character space (1000 EM units). An EM is a typographic unit of measurement equal to the size of a font. To convert to text space, divide the value returned by 1000. To convert to user space, multiply the text space value by the font size.

Read/Write

Read

Return Value

None

Exceptions

peErrCantGetWidths
genErrBadParm
genErrResourceLoadFailed

Notifications

None

Header File

PERCalls.h

Related Methods

PDEFontCreateWithParams

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEFontGetWidthsNow

```
void PDEFontGetWidthsNow (PDEFont font, CosDoc doc);
```

Description

Gets a Type0 font's width information for only the characters used in the file. Call this routine when the font was created with the **kPDEFontDeferWidths** flag but without the **kPDEFontCreateEmbedded** flag (if the font is to be embedded, call **PDEFontSubsetNow**, which also gets the width info).

Parameters

font	The font to embed.
doc	The container document.

Read/Write

Write

Return Value

None

Exceptions

None

Notifications

None

Header File

PEWCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDEFontIsMultiByte

```
ASBool PDEFontIsMultiByte (PDEFont font);
```

Description

Tests whether a font contains any multi-byte characters.

Parameters

font	A **PDEFont** object returned from one of the **PDEFontCreate** methods to test.

Read/Write

Read

Return Value

true if the font contains any multi-byte characters, **false** otherwise.

Exceptions

None

Notifications

None

Header File

PERCalls.h

Related Methods

PDEFontGetNumCodeBytes
PDEFontSumWidths
PDEFontGetOneByteEncoding

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEFontSubsetNow

```
void PDEFontSubsetNow (PDEFont font, CosDoc cosDoc);
```

Description

Subsets a given **PDEFont** in a **CosDoc**.

If you created **font** with **PDEFontCreateFromSysFont**, you must have set *both* the **kPDEFontCreateEmbedded** and **kPDEFontWillSubset** set in the **flags** parameter to be able to subset **font**.

NOTE: This method does not change the reference count.

Parameters

font	The **PDEFont** to subset.
cosDoc	The CosDoc whose font is subsetted.

Read/Write

Write

Return Value

None

Exceptions

peErrCantCreateFontSubset
peErrCantGetAttrs
peErrCantGetWidths
peErrCantEmbedFont
genErrBadParm
genErrResourceLoadFailed

Notifications

None

Header File

PEWCalls.h

Related Methods

PDEFontCreateFromSysFont

Example

```
PDDoc pdoc;
PDPage pdPage;
PDEFont gFont;

PDPageAcquirePDEContent(pdPage, extensionID);

/* Make sure you specify both font flags */
gFont = PDEFontCreateFromSysFont(sysFont, (kPDEFontCreateEmbedded|
kPDEFontWillSubset));

/* Add your text objects here */
...

PDPageSetPDEContent(pdPage, extensionID);
/* Make sure to call PDEFontSubsetNow after setting the PDEContent but
before releasing it */
PDEFontSubsetNow(gFont, PDDocGetCosDoc(pdoc));

PDERelease(gFont);

PDPageReleasePDEContent(pdPage, extensionID);
```

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEFontSumWidths

```
ASInt32 PDEFontSumWidths (PDEFont font, ASUns8* text,
ASInt32 len);
```

Description

Gets the sum to the widths of **len** characters from a string of single or multi-byte characters.

Parameters

font	A **PDEFont** object returned from one of the **PDEFontCreate** methods.
text	Pointer into a string of characters.
len	Number of characters in the string.

Read/Write

Read

Return Value

Width of text string in EM space. (In EM space, the width of “M” is about 1000 EM units).

Exceptions

genErrNoMemory
pdErrBadResMetrics
genErrResourceLoadFailed
peErrWrongPDEObjectType

Notifications

None

Header File

PERCalls.h

Related Methods

PDEFontGetNumCodeBytes
PDEFontIsMultiByte
PDEFontGetOneByteEncoding

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEFontTranslateGlyphIdsToUnicode

```
ASUns32 PDEFontTranslateGlyphIdsToUnicode (PDEFont font,
ASUns8* text, ASUns32 textLen, ASUns8* unicodeStr,
ASUns32 size);
```

Description

Translates a string to Unicode values. The **PDEFont** must have a **/ToUnicode** table.

Parameters

font	The font.
text	The string to convert.
textLen	The length of **text**, in bytes.
unicodeStr	*(Filled by the method)* Buffer to hold the translated string.
size	The size of the **unicodeStr** buffer.

Read/Write

Write

Return Value

0 if the string was successfully translated. If **unicodeStr** is too small for the translated string, it returns the number of bytes required.

Exceptions

genErrBadParm

Notifications

None

Header File

PEWCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDEForm

PDEFormAcquireXGroup

```
PDEXGroup PDEFormAcquireXGroup (PDEForm pdeForm);
```

Description

Acquires the transparency group dictionary of the XObject form.

Parameters

pdeForm	The from.

Read/Write

Read

Return Value

Transparency group object.

Exceptions

peErrWrongPDEObjectType

Notifications

None

Header File

PERCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDEFormCreateFromCosObj

```
PDEForm PDEFormCreateFromCosObj (const CosObj* xObjectP,
const CosObj* resourcesP, ASFixedMatrixP matrixP);
```

Description

Creates a new form from an existing Cos object.

Call **PDERelease** to dispose of the returned form object when finished with it.

Parameters

xObjectP	Cos object from which a **PDEForm** is created.
resourcesP	The **xObjectP**'s Resources dictionary. If you don't pass in a Resource object, subsequent calls to **PDPageAcquirePDEContent** will fail (after the file is saved).
matrixP	Pointer to **ASFixedMatrix** that holds the transformation matrix to use for the form.

Read/Write

Write

Return Value

The newly created form object.

Exceptions

None

Notifications

None

Header File

PEWCalls.h

Related Methods

PDEFormGetCosObj

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEFormGetContent

```
PDEContent PDEFormGetContent (PDEForm form);
```

Description

Gets a **PDEContent** object for a form.

NOTE: Unlike other "GetContent" methods, this method does increment the reference count of the returned **PDEContent**.

Parameters

form	The form whose content is obtained.

Read/Write

Write

Return Value

Content for **form**.

Exceptions

peErrWrongPDEObjectType
peErrPStackUnderflow

Notifications

None

Header File

PEWCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEFormGetCosObj

```
void PDEFormGetCosObj (PDEForm form, CosObj* cosObjP);
```

Description

Gets a Cos object for a form.

Parameters

form	The form whose Cos object is obtained.
cosObjP	*(Filled by the method)* Cos object for the form.

Read/Write

Read

Return Value

None

Exceptions

peErrWrongPDEObjectType

Notifications

None

Header File

PERCalls.h

Related Methods

PDEFormCreateFromCosObj

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEFormHasXGroup

```
ASBool PDEFormHasXGroup (PDEForm pdeForm);
```

Description

Determines whether the XObject form has a Transparency XGroup

Parameters

pdeForm	The form.

Read/Write

Read

Return Value

true if the XObject form has a Transparency XGroup.

Exceptions

peErrWrongPDEObjectType

Notifications

None

Header File

PERCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDEFormSetXGroup

```
void PDEFormSetXGroup (PDEForm pdeForm, PDEXGroup pdeXGroup);
```

Description

Sets the transparency group dictionary of the form XObject.

Parameters

pdeForm	The font XObject.
pdeXGroup	The transparency dictionary.

Read/Write

Write

Return Value

None

Exceptions

None

Notifications

None

Header File

PEWCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDEGroup

PDEGroupCreate

```
PDEGroup PDEGroupCreate (void);
```

Description

Creates a **PDEGroup** object.

Parameters

None

Read/Write

Write

Return Value

The newly created **PDEGroup**.

Exceptions

None

Notifications

None

Header File

PEWCalls.h

Related Methods

PDEGroupSetContent

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEGroupGetContent

```
PDEContent PDEGroupGetContent (PDEGroup pdeGroup);
```

Description

Gets the **PDEContent** for a **PDEGroup**.

NOTE: This method does not change the reference count of the returned **PDEContent**.

Parameters

pdeGroup	The group whose content is obtained.

Read/Write

Read

Return Value

The **PDEContent** in **pdeGroup**.

Exceptions

peErrWrongPDEObjectType

Notifications

None

Header File

PERCalls.h

Related Methods

PDEGroupSetContent

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEGroupSetContent

```
void PDEGroupSetContent (PDEGroup pdeGroup,
PDEContent pdeContent);
```

Description

Sets the **PDEContent** for a **PDEGroup**. The existing **PDEContent** is released by this method.

NOTE: This method increments the reference count of **pdeContent**.

Parameters

pdeContainer	A container object.
pdeContent	The content to set for **pdeGroup**.

Read/Write

Write

Return Value

None

Exceptions

peErrWrongPDEObjectType

Notifications

None

Header File

PEWCalls.h

Related Methods

PDEGroupGetContent

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEImage

PDEImageCreate

```
PDEImage PDEImageCreate (PDEImageAttrsP attrsP,
ASUns32 attrsSize, ASFixedMatrixP matrixP, ASUns32 flags,
PDEColorSpace colorSpace, PDEColorValueP colorValueP,
PDEFilterArrayP filtersP, ASStm dataStm, ASUns8* data,
ASUns32 encodedLen);
```

Description

Creates an image object.

The image data may be specified as a stream or as a buffer. If **dataStm** is non-**NULL**, **data** is ignored.

See **PDEImageSetDataStm** for information on handling the stream.

The caller must dispose of **datStm** after calling this method.

Call **PDERelease** to dispose of the returned image object when finished with it.

Parameters

attrsP	Pointer to **PDEImageAttrs** with attributes of the image.
attrsSize	Size of the **attrsP** buffer, in bytes.
matrixP	Pointer to **ASFixedMatrix** that holds the transformation matrix to use for the image.
flags	**PDEImageDataFlags** flags. If the **kPDEImageEncodedData** flag is set, and the data is provided directly (not as a stream), then **encodedLen** must specify the length of **data**.
colorSpace	Color space of the image. When the image is an imagemask, **colorSpace** is the color space of the **colorValueP** argument.
colorValueP	Pointer to **PDEColorValue** structure. If the image is an image mask, **colorValueP** must be provided.
filtersP	Pointer to **PDEFilterArray** structure that specifies which filters to use in encoding the contents; may be **NULL**. Filters will be used to encode the data in the order in which they are specified in the array.
dataStm	Stream holding the image data.

data	Image data. If **dataStm** is non-**NULL**, **data** is ignored. If there is a great deal of data, as for a large image, it is recommended you use the **dataStm** parameter for the image data or use the **PDEImageCreateFromCosObj** method.
encodedLen	Encoded length of **data**, in bytes.

Read/Write

Write

Return Value

The image.

Exceptions

peErrUnknownPDEColorSpace
pageErrReadLessImageData
peErrWrongPDEObjectType
genErrBadParm

Notifications

None

Header File

PEWCalls.h

Related Methods

PDEImageCreateFromCosObj

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEImageCreateFromCosObj

```
PDEImage PDEImageCreateFromCosObj (const CosObj* imageObjP,
ASFixedMatrixP matrixP, PDEColorSpace colorSpace,
PDEColorValueP colorValueP);
```

Description

Creates an image object from a Cos object.

Call **PDERelease** to dispose of the returned image object when finished with it.

Parameters

imageObjP	Cos object for the image.
matrixP	Pointer to **ASFixedMatrix** that holds the transformation matrix to use for the image.
colorSpace	Color space used for the image, if the image is an image mask; otherwise, set to **NULL**.
colorValueP	Pointer to **PDEColorValue** structure. If the image is an imagemask, **colorValueP** must be provided.

Read/Write

Write

Return Value

Image corresponding to the Cos object.

Exceptions

peErrUnknownPDEColorSpace
pageErrReadLessImageData
peErrWrongPDEObjectType
genErrBadParm

Notifications

None

Header File

PEWCalls.h

Related Methods

PDEImageCreate
PDEImageGetCosObj

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEImageDataIsEncoded

```
ASBool PDEImageDataIsEncoded (PDEImage image,
ASUns32* encodedLenP);
```

Description

Determines if image data is encoded or not. Used only for inline images; not relevant to **XObject** images.

Always returns **false** for **XObject** images; **XObject** image data can be obtained from **PDEImageGetData** or **PDEImageGetDataStm**, either encoded or decoded.

If an inline image is obtained via the **PDEContentCreateFromCosObj** or related methods, the inline image data is always decoded. That is, if PDFEdit parses the stream, the data is always decoded. Only if **PDEImageCreate** is used to explicitly create a new image using encoded data does **PDEImageDataIsEncoded** return **true**.

Parameters

image	Image to examine.
encodedLenP	*(Filled by the method)* Length of the encoded data—if the data is encoded, that is, the method returns **true**.

Read/Write

Read

Return Value

true if **PDEImageGetData** returns encoded data, **false** otherwise. Returns **false** for **XObject** images.

Exceptions

peErrWrongPDEObjectType

Notifications

None

Header File

PERCalls.h

Related Methods

PDEImageGetData

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEImageGetAttrs

```
void PDEImageGetAttrs (PDEImage image, PDEImageAttrsP attrsP,
ASUns32 attrsSize);
```

Description

Gets the attributes for an image.

Parameters

image	Image whose attributes are obtained.
attrsP	*(Filled by the method)* Pointer to **PDEImageAttrs** structure with attributes of **image**.
attrsSize	Size of the **attrsP** buffer, in bytes.

Read/Write

Read

Return Value

None

Exceptions

peErrUnknownPDEColorSpace

Notifications

None

Header File

PERCalls.h

Related Methods

PDEImageGetColorSpace
PDEImageGetData
PDEImageGetDataLen
PDEImageGetDataStm
PDEImageGetDecodeArray
PDEImageGetFilterArray

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEImageGetColorSpace

```
PDEColorSpace PDEImageGetColorSpace (PDEImage image);
```

Description

Gets the color space object for an image.

NOTE: (For the Adobe PDF Library v1 only) If you get the **PDEColorSpace** for an inline image, then get the **CosObj** for that color space with **PDEColorSpaceGetCosObj**, this **CosObj** is limited. Cos objects that are the result of parsing inline dictionaries in the PDF page contents are a special class of Cos objects. You should never depend on these objects lasting the lifetime of the document. You should extract the information you need from the object immediately and refer to it no further in your code.

NOTE: This method does not change the reference count of the returned **PDEColorSpace**.

Parameters

image	Image whose color space is obtained.

Read/Write

Read

Return Value

Color space for **image**. Returns **NULL** if **image** is an image mask.

Exceptions

None

Notifications

None

Header File

PERCalls.h

Related Methods

PDEImageGetAttrs
PDEImageGetData
PDEImageGetDataLen
PDEImageGetDataStm
PDEImageGetDecodeArray
PDEImageGetFilterArray

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEImageGetCosObj

```
void PDEImageGetCosObj (PDEImage image, CosObj* cosObjP);
```

Description

Gets a Cos object for an image.

Parameters

image	Image whose Cos object is obtained.
cosObjP	*(Filled by the method)* Cos object for the image.

Read/Write

Read

Return Value

None

Exceptions

peErrWrongPDEObjectType

Notifications

None

Header File

PERCalls.h

Related Methods

PDEImageCreateFromCosObj
PDEImageIsCosObj

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEImageGetData

```
void PDEImageGetData (PDEImage image, ASUns32 flags,
ASUns8* buffer);
```

Description

Gets an image's data.

If the image is an **XObject** image, data is always returned as decoded data.

See the note about inline images under **PDEImageDataIsEncoded**.

Parameters

image	Image whose data is obtained.
flags	Unused—must be zero.
buffer	Image data. If the data is decoded, **buffer** must be large enough to contain the number of bytes specified in the **PDEImageAttrs** structure obtained by **PDEImageGetAttrs**. If the data is encoded, **buffer** must be large enough to contain the number of bytes in the **encodedLenP** parameter obtained by **PDEImageDataIsEncoded**.

Read/Write

Read

Return Value

None

Exceptions

peErrUnknownPDEColorSpace
genErrBadParm
peErrWrongPDEObjectType

Notifications

None

Header File

PERCalls.h

Related Methods

PDEImageDataIsEncoded
PDEImageSetColorSpace
PDEImageGetAttrs
PDEImageGetColorSpace

PDEImageGetDataLen
PDEImageGetDataStm
PDEImageGetDecodeArray
PDEImageGetFilterArray

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEImageGetDataLen

```
ASInt32 PDEImageGetDataLen (PDEImage image);
```

Description

Gets the length of data for an image.

Parameters

image	Image whose data length is obtained.

Read/Write

Read

Return Value

Number of bytes of image data, specified by the width, height, bits per component, and color space of the image.

Exceptions

peErrUnknownPDEColorSpace
genErrBadParm
peErrWrongPDEObjectType

Notifications

None

Header File

PERCalls.h

Related Methods

PDEImageGetData

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEImageGetDataStm

```
ASStm PDEImageGetDataStm (PDEImage image, ASUns32 flags);
```

Description

Gets a data stream for an image. May only be called for **XObject** images.

The caller must dispose of the returned **ASStm** by calling **ASStmClose**.

Parameters

image	Image whose data stream is obtained.
flags	**PDEImageDataFlags** flags. If the **kPDEImageEncodedData** flag is set, data is returned in encoded form. Otherwise, data is decoded.

Read/Write

Read

Return Value

Stream for **image**.

Exceptions

peErrWrongPDEObjectType
genErrBadParm

Notifications

None

Header File

PERCalls.h

Related Methods

PDEImageSetDataStm
PDEImageGetDataLen

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEImageGetDecodeArray

```
ASUns32 PDEImageGetDecodeArray (PDEImage image,
ASFixed* decode, ASUns32 decodeSize);
```

Description

Gets the decode array of from the attributes of the image. This array specifies the parameters used with the array of filters used to decode the image.

Parameters

image	The image whose decode array is obtained.
decode	*(Filled by the method)* Pointer to the decode array. If **NULL**, the number of decode elements required is returned.
decodeSize	Size of **decode** in bytes.

Read/Write

Read

Return Value

Number of elements in the decode array.

Exceptions

None

Notifications

None

Header File

PERCalls.h

Related Methods

PDEImageSetDecodeArray

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEImageGetFilterArray

```
ASInt32 PDEImageGetFilterArray (PDEImage image,
PDEFilterArrayP filtersP);
```

Description

Gets the filter array for an image.

Parameters

image	Image whose filter array is obtained.
filtersP	*(Filled by the method)* Pointer to **PDEFilterArray** structure to fill with the current filter array for the image. **filtersP** must be large enough to contain all of the elements. May be **NULL** to obtain the number of filter elements.

Read/Write

Read

Return Value

Number of filter elements.

Exceptions

peErrWrongPDEObjectType

Notifications

None

Header File

PERCalls.h

Related Methods

PDEImageGetAttrs
PDEImageGetColorSpace
PDEImageGetDataLen
PDEImageGetDecodeArray

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEImageGetMatteArray

```
ASUns32 PDEImageGetMatteArray (PDEImage image, ASFixed* matte,
ASUns32 numComp);
```

Description

Gets the matte array for the image XObject.

Parameters

image	The image XObject.
matte	*(Filled by the method)* An array of values.
numComp	The number of values in **matte**.

Read/Write

Read

Return Value

Number of values copied.

Exceptions

None

Notifications

None

Header File

PERCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDEImageGetSMask

```
PDEImage PDEImageGetSMask (PDEImage image);
```

Description

Get the soft mask.

Parameters

image	An object of type **PDEImage**.

Read/Write

Read

Return Value

An object of type **PDEImage**.

Exceptions

peErrWrongPDEObjectType

Notifications

None

Header File

PERCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDEImageHasSMask

```
ASBool PDEImageHasSMask (PDEImage image);
```

Description

Checks whether the image has a soft mask.

Parameters

image	An object of type **PDEImage**.

Read/Write

Read

Return Value

true if the soft mask exists; **false** otherwise.

Exceptions

peErrWrongPDEObjectType

Notifications

None

Header File

PERCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDEImageIsCosObj

```
ASBool PDEImageIsCosObj (PDEImage image);
```

Description

Determines if an image is an XObject image.

Parameters

image	Image to examine.

Read/Write

Read

Return Value

true if the image is an XObject image, **false** otherwise.

Exceptions

peErrWrongPDEObjectType

Notifications

None

Header File

PERCalls.h

Related Methods

PDEImageGetCosObj

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEImageSetColorSpace

```
void PDEImageSetColorSpace, (PDEImage image,
PDEColorSpace space)
```

Description

Sets the color space of the image.

Parameters

image	Image whose color space is obtained.
space	An object of type **PDEColorSpace**.

Read/Write

Write

Return Value

None

Exceptions

peErrWrongPDEObjectType

Notifications

None

Header File

PEWCalls.h

Related Methods

PDEImageGetColorSpace
PDEImageSetColorSpace

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDEImageSetData

```
void PDEImageSetData (PDEImage image, ASUns32 flags,
ASUns8* buffer, ASUns32 encodedLen);
```

Description

Sets data for an image.

Parameters

image	Image whose data is set.
flags	A set of **PDEImageDataFlags** flags. If **kPDEImageEncodedData** is set, the data must be encoded for the current filters, and **encodedLen** is the length of the encoded data. If the **kPDEImageEncodedData** flag is not set, data is not encoded and **encodedLen** is the size of the decoded data.
buffer	Image data.
encodedLen	Length of the encoded data.

Read/Write

Write

Return Value

None

Exceptions

peErrUnknownPDEColorSpace
genErrBadParm
peErrWrongPDEObjectType

Notifications

None

Header File

PEWCalls.h

Related Methods

PDEImageGetData
PDEImageGetDataLen
PDEImageGetDataStm

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEImageSetDataStm

```
void PDEImageSetDataStm (PDEImage image, ASUns32 flags,
PDEFilterArrayP filtersP, ASStm stm);
```

Description

Sets a data stream for an image. Can only be used for **XObject** images.

The caller must dispose of the stream by calling **ASStmClose**.

Parameters

image	Image whose data stream is set.
flags	**PDEImageDataFlags** flags. If the **kPDEImageEncodedData** flag is set, the stream must be encoded.
filtersP	Pointer to **PDEFilterArray** structure. If not **NULL**, is used to build Cos objects for the Filter, DecodeParms, and EncodeParms objects. If **filtersP** is **NULL**, the existing Filter and DecodeParms are used. EncodeParms is set to DecodeParms if it exists.
stm	Stream for the image data.

Read/Write

Write

Return Value

None

Exceptions

peErrUnknownPDEColorSpace
peErrWrongPDEObjectType
genErrBadParm

Notifications

None

Header File

PEWCalls.h

Related Methods

PDEImageGetData
PDEImageGetDataLen
PDEImageGetDataStm

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEImageSetDecodeArray

```
void PDEImageSetDecodeArray (PDEImage image, ASFixed* decode,
ASUns32 decodeSize);
```

Description

Sets the decode array of the image. This array specifies the parameters used with the array of filters used to decode the image.

Normally, the decode array is accessed through the **decode** field in the **PDEImageAttrs** structure. However, this method defines a decode array to handle images with a color space that has more than 4 components.

Parameters

image	Image whose decode array is set.
decode	Pointer to the decode array.
decodeSize	Size of **decode** array in bytes.

Read/Write

Write

Return Value

None

Exceptions

None

Notifications

None

Header File

PEWCalls.h

Related Methods

PDEImageGetDecodeArray
PDEImageGetFilterArray

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEImageSetMatteArray

```
void PDEImageSetMatteArray (PDEImage pdeImage,
ASFixed* mArray, ASUns32 numComp);
```

Description

Sets the matte array for the image XObject.

Parameters

pdeImage	The image XObject.
mArray	An array of values.
numComp	The number of values in **mArray**.

Read/Write

Write

Return Value

None

Exceptions

None

Notifications

None

Header File

PEWCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDEImageSetSMask

```
void PDEImageSetSMask (PDEImage pdeImage, PDEImage sMask);
```

Description

Sets the soft mask.

Parameters

pdeImage	The image XObject.
sMask	The soft mask.

Read/Write

Write

Return Value

None

Exceptions

peErrWrongPDEObjectType

Notifications

None

Header File

PEWCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDEObject

PDEAcquire

```
void PDEAcquire (PDEObject obj);
```

Description

Increments the reference count for an object.

Parameters

obj	The element whose count is incremented.

Read/Write

Read

Return Value

None

Exceptions

peErrWrongPDEObjectType

Notifications

None

Header File

PERCalls.h

Related Methods

PDERelease

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEAddTag

```
void PDEAddTag (PDEObject object, ASInt32 clientID,
ASUns32 key, void* valuePtr);
```

Description

Adds an identifier–value pair to an object.

The **clientID**–**tag** combination is a unique identifier for the value. Each client has its own identifier space. It is often convenient to use **ASAtom**s as tags.

NOTE: Tags are a purely memory-resident feature. In addition, management of tags are the responsibility of the client. A client must manage any memory pointed to by a tag. This method only contains a pointer to the data passed in by the client. The data and the pointer will not be saved to a file; the generic pointer type is not in the PDF specification.

Parameters

object	The element to tag. **object** may be a **PDEElement**, **PDEContent**, **PDEFont**, **PDEColorSpace**, and so on.
clientID	Identifies the caller/client. For plug-ins, this should be the **gExtensionID** extension. For the Adobe PDF Library, if there is only one client of the PDFEdit subsystem, **clientID** should be zero. If there are multiple clients, each should specify a nonzero, non-negative **clientID**. (A negative **clientID** is reserved for the implementation.)
tag	The tag to add to **object**. If **tag** is 0, this is the same as calling **PDERemoveTag**. In other words, you can't tell the difference between a tag whose value is zero and a tag that is nonexistent.
valuePtr	Pointer to a value to associate with **object**. Only the pointer is stored. If the pointer points to data, it is the responsibility of the client to manage the data and its memory.

Read/Write

Write

Return Value

None

Exceptions

peErrWrongPDEObjectType

Notifications

None

Header File

PEWCalls.h

Related Methods

PDEGetTag
PDERemoveTag

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEGetTag

```
void* PDEGetTag (PDEObject object, ASInt32 clientID,
ASUns32 tag);
```

Description

Gets an object's value for a given **clientID–tag** identifier that was added by **PDEAddTag**.

Parameters

object	The element whose value is obtained.
clientID	Identifies the caller/client. For plug-ins, this should be the **gExtensionID** extension. For the Adobe PDF Library, if there is only one client of the PDFEdit subsystem, **clientID** should be zero. If there are multiple clients, each should specify a nonzero, non-negative **clientID**. (A negative **clientID** is reserved for the implementation.)
tag	The **object**'s tag. If **object** has no tag, this is **0**.

Read/Write

Read

Return Value

The value associated with the **clientID–tag** identifier.

Exceptions

peErrWrongPDEObjectType

Notifications

None

Header File

PEWCalls.h

Related Methods

PDEAddTag
PDERemoveTag

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEObjectGetType

```
ASInt32 PDEObjectGetType (PDEObject obj);
```

Description

Gets the type of an element.

Parameters

obj	The element whose type is obtained.

Read/Write

Read

Return Value

The object type, which is one of **PDEType**.

Exceptions

peErrWrongPDEObjectType

Notifications

None

Header File

PERCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDERelease

```
void PDERelease (PDEObject obj);
```

Description

Decrements the reference count for the object. If the count becomes zero, the object is destroyed.

Do not call **PDERelease** on **PDEContent** that you acquired with **PDPageAcquirePDEContent**; call **PDPageReleasePDEContent** instead.

NOTE: Objects should only be disposed of with **PDERelease** if the method by which they were obtained incremented the reference count for the object. In general, methods that "get" an object do not increment the reference count. Methods that increment the reference count typically contain the word "acquire" or "create" in the method name and specifically state that you must release the object.

Parameters

obj	The element released.

Read/Write

Read

Return Value

None

Exceptions

None

Notifications

None

Header File

PERCalls.h

Related Methods

PDEAcquire

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDERemoveTag

```
void PDERemoveTag (PDEObject object, ASInt32 clientID,
ASUns32 tag);
```

Description

Removes an object's value for a given **clientID**–**tag** identifier that was added by **PDEAddTag**.

If **PDEAddTag** is called with a 0 tag, this is the same as calling **PDERemoveTag**.

Parameters

object	The element whose tag is removed.
clientID	Identifies the caller/client. For plug-ins, this should be the **gExtensionID** extension. For the Adobe PDF Library, if there is only one client of the PDFEdit subsystem, **clientID** should be zero. If there are multiple clients, each should specify a nonzero, non-negative **clientID**. (A negative **clientID** is reserved for the implementation.)
tag	Tag.

Read/Write

Write

Return Value

None

Exceptions

peErrWrongPDEObjectType

Notifications

None

Header File

PEWCalls.h

Related Methods

PDEAddTag
PDEGetTag

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEPath

PDEPathAddSegment

```
void PDEPathAddSegment (PDEPath path, ASUns32 segType,
ASFixed x1, ASFixed y1, ASFixed x2, ASFixed y2, ASFixed x3,
ASFixed y3);
```

Description

Adds a segment to a path. The number of **ASFixed** values used depends upon **segType**:
kPDEMoveTo: **x1**, **y1**
kPDELineTo: **x1**, **y1**
kPDECurveTo: **x1**, **y1**, **x2**, **y2**, **x3**, **y3**
kPDECurveToV: **x1**, **y1**, **x2**, **y2**
kPDECurveToY: **x1**, **y1**, **x2**, **y2**
kPDERect: **x1**, **y1**, **x2** (width), **y2** (height)
kPDEClosePath: None

Parameters

path	The path to which a segment is added.
data	A **PDEPathElementType** value indicating the type of path to add.
x1	**x**-coordinate of first point.
y1	**y**-coordinate of first point.
x2	**x**-coordinate of second point.
y2	**y**-coordinate of second point.
x3	**x**-coordinate of third point.
y3	**y**-coordinate of third point.

Read/Write

Write

Return Value

None

Exceptions

genErrBadParm

Notifications

None

Header File

PEWCalls.h

Related Methods

PDEPathSetData

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEPathCreate

```
PDEPath PDEPathCreate (void);
```

Description

Creates an empty path element.

Call **PDERelease** to dispose of the returned path object when finished with it.

Parameters

None

Read/Write

Write

Return Value

An empty path element.

Exceptions

None

Notifications

None

Header File

PEWCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEPathGetData

```
ASUns32 PDEPathGetData (PDEPath path, ASInt32* data,
ASUns32 dataSize);
```

Description

Gets the size of the path data and, optionally, the path data.

Parameters

path	The path whose data is obtained.
data	*(Filled by the method)* Pointer to path data. If **data** is non-**NULL**, it contains a variable-sized array of path operators and operands. The format is a 32-bit operator followed by 0 to 3 **ASFixedPoint** values, depending on the operator. Opcodes are codes for **moveto**, **lineto**, **curveto**, **rect**, or **closepath** operators; operands are **ASFixedPoint** values. If **data** is **NULL**, the number of bytes required for data is returned by the method. NOTE: Returns "raw" path data. If you want the points in page coordinates, concatenate the path data points with the **PDEElement** matrix obtained from **PDEElementGetMatrix**.
dataSize	Specifies the size of the buffer provided in **data**. If it is less than the length of the path data, the method copies **datasize** bytes.

Read/Write

Read

Return Value

Length of data of **path**.

Exceptions

peErrWrongPDEObjectType

Notifications

None

Header File

PERCalls.h

Related Methods

PDEPathSetData

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEPathGetPaintOp

```
ASUns32 PDEPathGetPaintOp (PDEPath path);
```

Description

Gets the fill and stroke attributes of a path.

Parameters

path	The path whose fill and stroke attributes are obtained.

Read/Write

Read

Return Value

A set of **PDEPathOpFlags** flags describing fill and stroke attributes.

Exceptions

peErrWrongPDEObjectType

Notifications

None

Header File

PERCalls.h

Related Methods

PDEPathSetPaintOp

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEPathSetData

```
void PDEPathSetData (PDEPath path, ASInt32* data,
ASUns32 dataSize);
```

Description

Sets new path data for a path element.

Parameters

path	The path whose data is set.
data	Pointer to path data. It is a variable-sized array of path operators and operands. The format is a 32-bit operator followed by 0 to 3 **ASFixedPoint** values, depending on the operator. Operators are codes for **moveto**, **lineto**, **curveto**, **rect**, or **closepath** operators and must be one of **PDEPathElementType**. Operands are **ASFixedPoint** values. The data is copied into the **PDEPath** object.
dataSize	Size of the new path data, in bytes.

Read/Write

Read

Return Value

None

Exceptions

peErrWrongPDEObjectType
genErrBadParm

Notifications

None

Header File

PEWCalls.h

Related Methods

PDEPathGetData

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEPathSetPaintOp

```
void PDEPathSetPaintOp (PDEPath path, ASUns32 op);
```

Description

Sets the fill and stroke attributes of a path.

Parameters

path	The path whose fill and stroke attributes are set.
op	The operation to set; must be one of **PDEPathOpFlags**.

Read/Write

Read

Return Value

None

Exceptions

peErrWrongPDEObjectType

Notifications

None

Header File

PEWCalls.h

Related Methods

PDEPathGetPaintOp

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEPattern

PDEPatternCreate

```
PDEPattern PDEPatternCreate (const CosObj* cosObjP);
```

Description

Creates a pattern object that can be used for a Pattern color space. See Section 4.6 in the *PDF Reference* for more information about patterns.

Call **PDERelease** to dispose of the returned pattern object when finished with it.

Parameters

cosObjP	A **CosStream** for the pattern.

Read/Write

Write

Return Value

A pattern.

Exceptions

None

Notifications

None

Header File

PEWCalls.h

Related Methods

PDEPatternGetCosObj

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEPatternGetCosObj

```
void PDEPatternGetCosObj (PDEPattern pattern,
CosObj* cosObjP);
```

Description

Gets a Cos object corresponding to a pattern object.

Parameters

pattern	Pattern whose Cos object is obtained.
cosObjP	*(Filled by the method)* Cos object for the pattern.

Read/Write

Read

Return Value

None

Exceptions

None

Notifications

None

Header File

PERCalls.h

Related Methods

PDEPatternCreate

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEPlace

PDEPlaceCreate

```
PDEPlace PDEPlaceCreate (ASAtom mcTag, CosObj* cosObjP,
ASBool isInline);
```

Description

Creates a place object.

Call **PDERelease** to dispose of the returned place object when finished with it.

Parameters

mcTag	Tag name for the place. Must not contain any white space characters (for example, spaces or tabs).
cosObjP	Optional Marked Content dictionary associated with the place.
isInline	If **true**, place is emitted into the page content stream inline.

Read/Write

Write

Return Value

The place object.

Exceptions

None

Notifications

None

Header File

PEWCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEPlaceGetDict

```
ASBool PDEPlaceGetDict (PDEPlace pdePlace, CosObj* placeDictP,
ASBool* isInline);
```

Description

Gets the Marked Content dictionary for a **PDEPlace**.

Parameters

pdePlace	The place whose Marked Content dictionary is obtained.
placeDictP	*(Filled by the method)* Pointer to the Marked Content dictionary; may be **NULL**.
isInline	*(Filled by the method)* If **true**, the Marked Content dictionary is inline; may be **NULL**.

Read/Write

Read

Return Value

true if dictionary is obtained, **false** if no dictionary is present.

Exceptions

peErrWrongPDEObjectType

Notifications

None

Header File

PERCalls.h

Related Methods

PDEPlaceSetDict

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEPlaceGetMCTag

```
ASAtom PDEPlaceGetMCTag (PDEPlace pdePlace);
```

Description

Gets the Marked Content tag for a **PDEPlace**.

Parameters

pdePlace	The place whose Marked Content tag is obtained.

Read/Write

Read

Return Value

Tag for **pdePlace**.

Exceptions

peErrWrongPDEObjectType

Notifications

None

Header File

PERCalls.h

Related Methods

PDEPlaceSetMCTag

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEPlaceSetDict

```
void PDEPlaceSetDict (PDEPlace pdePlace, CosObj* placeDictP,
ASBool isInline);
```

Description

Sets the Marked Content dictionary for a **PDEPlace**.

Parameters

pdePlace	The place whose Marked Content dictionary is set.
placeDictP	Marked Content dictionary for **pdePlace**.
isInline	If **true**, the dictionary is emitted inline.

Read/Write

Write

Return Value

None

Exceptions

peErrWrongPDEObjectType

Notifications

None

Header File

PEWCalls.h

Related Methods

PDEPlaceGetDict

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEPlaceSetMCTag

```
void PDEPlaceSetMCTag (PDEPlace pdePlace, ASAtom mcTag);
```

Description

Sets the Marked Content tag for a **PDEPlace**.

Parameters

pdePlace	The place whose Marked Content tag is set.
mcTag	The tag for **pdePlace**.

Read/Write

Write

Return Value

None

Exceptions

peErrWrongPDEObjectType

Notifications

None

Header File

PEWCalls.h

Related Methods

PDEPlaceGetMCTag

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEPS

PDEPSCreate

```
PDEPS PDEPSCreate (PDEPSAttrsP attrsP, ASUns32 attrsSize,
ASStm dataStm, ASUns8* data, ASUns32 dataSize);
```

Description

Creates a **PDEPS** object. **data** and **dataStm** may be **NULL**. If so, use **PDEPSSetData** and **PDEPSSetDataStm** to attach data to the object. If **dataStm** is non-**NULL**, then data will be ignored.

See the description of **PDEPSSetDataStm** for how the stream is handled. If **data** is non-**NULL** and **dataStm** is **NULL**, the data must contain **dataSize** number of bytes as specified in the **PDEPSAttrsP**.

The caller must dispose of the stream after calling this method.

Parameters

attrsP	Pointer to **PDEPSAttrs** attributes data structure.
attrsSize	Size of attributes data structure (**sizeof(PDEPSAttrs)**).
dataStm	*(May be **NULL**)* Data. See above.
data	*(May be **NULL**)* Data stream. See above.
dataSize	Number of bytes of **data**.

Read/Write

Write

Return Value

An object of type **PDEPS**.

Exceptions

None

Notifications

None

Header File

PEWCalls.h

Related Methods

PDEPSCreateFromCosObj

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDEPSCreateFromCosObj

```
PDEPS PDEPSCreateFromCosObj (const CosObj* cosObjP);
```

Description

Creates a **PDEPS** object from a **CosObj** object.

Parameters

cosObjP	Object of type **CosObj**.

Read/Write

Write

Return Value

An object of type **PDEPS**.

Exceptions

genErrBadParm

Notifications

None

Header File

PEWCalls.h

Related Methods

PDEPSCreate

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDEPSGetAttrs

```
void PDEPSGetAttrs (PDEPS ps, PDEPSAttrsP attrsP,
ASUns32 attrsSize);
```

Description

Returns a **PDEPS** object's attributes.

Parameters

ps	An object of type **PDEPS.**
attrsP	*(Filled by the method)* Pointer to **PDEPSAttrs** data structure containing the attributes information.
attrsSize	The size of the **attrsP** buffer (**sizeof(PDEPSAttrs)**).

Read/Write

Read

Return Value

A pointer to a data structure of type **PDEPSAttrs**.

Exceptions

None

Notifications

None

Header File

PERCalls.h

Related Methods

PDEPSCreate

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDEPSGetData

```
ASUns32 PDEPSGetData (PDEPS ps, ASUns8* buffer,
ASUns32 bufferSize, ASInt32 offset);
```

Description

Gets all or part of the image data.

Parameters

ps	An object of type **PDEPS**.
buffer	*(Filled by the method)* Receives the data.
bufferSize	Size of the buffer.
offset	Offset into the source data at which to start filling buffer.

Read/Write

Read

Return Value

Returns the number of bytes written into the buffer. If the return value is less than **bufferSize**, then there is no more data.

Exceptions

None

Notifications

None

Header File

PERCalls.h

Related Methods

PDEPSSetData

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDEPSGetDataStm

```
ASStm PDEPSGetDataStm (PDEPS ps);
```

Description

Gets a stream for the data. The data in the stream is decoded (no filters). The caller must dispose of the stream.

Parameters

ps	An object of type **PDEPS**.

Read/Write

Read

Return Value

An object of type **ASStm**.

Exceptions

None

Notifications

None

Header File

PERCalls.h

Related Methods

PDEPSSetDataStm

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDEPSSetData

```
void PDEPSSetData (PDEPS ps, ASUns8* buffer,
ASUns32 bufferSize);
```

Description

Sets the data for an object of type **PDEPS**.

Parameters

ps	An object of type **PDEPS**.
buffer	Contains the data.
bufferSize	Length of the data in bytes.

Read/Write

Write

Return Value

None

Exceptions

None

Notifications

None

Header File

PEWCalls.h

Related Methods

PDEPSGetData

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDEPSSetDataStm

```
void PDEPSSetDataStm (PDEPS ps, ASStm stm);
```

Description

Sets a stream for the data. The data must be un-encoded (no filters). The caller must dispose of the stream.

Parameters

ps	An object of type **PDEPS.**
stm	stm is a stream for the data.

Read/Write

Write

Return Value

None

Exceptions

None

Notifications

None

Header File

PEWCalls.h

Related Methods

PDEPSGetDataStm

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

PDESoftMask

PDESoftMaskAcquireForm

```
PDEForm PDESoftMaskAcquireForm (PDESoftMask pdeSoftMask,
ASFixedMatrixP matrixP);
```

Description

Acquire sthe **PDEForm** that defines the soft mask.

Parameters

pdeSoftMask	An object of type **PDESoftMask**.
matrixP	Matrix defining the transformation from coordinate space to user space.

Read/Write

Read

Return Value

The XObject form of the soft mask.

Exceptions

genErrBadParm
peErrWrongPDEObjectType

Notifications

None

Header File

PERCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDESoftMaskCreate

```
PDESoftMask PDESoftMaskCreate (CosDoc doc,
PDESoftMaskCreateFlags type, PDEForm pdeForm);
```

Description

Creates a new soft mask object.

Parameters

doc	The container document.
type	Specifies how the mask is to be computed. One of the **PDESoftMaskCreateFlags**.
pdeForm	The form XObject that defines the soft mask. It is the source of the mask values and the **PDColorSpace** in which the composite computation is to be done.

Read/Write

Write

Return Value

The newly created object.

Exceptions

None

Notifications

None

Header File

PEWCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDESoftMaskCreateFromCosObj

```
PDESoftMask PDESoftMaskCreateFromCosObj
(const CosObj* cosObjP);
```

Description

Creates a new soft mask object from its Cos representation.

Parameters

cosObjP	The soft mask dictionary.

Read/Write

Write

Return Value

The newly created object.

Exceptions

None

Notifications

None

Header File

PEWCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDESoftMaskCreateFromName

```
PDESoftMask PDESoftMaskCreateFromName (ASAtom name);
```

Description

Create a new soft mask from a name.

Parameters

name	The new name for the soft mask. NOTE: Currently, the only valid name is **None**.

Read/Write

Write

Return Value

The newly created object.

Exceptions

None

Notifications

None

Header File

PEWCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDESoftMaskGetBackdropColor

```
ASInt32 PDESoftMaskGetBackdropColor (PDESoftMask pdeSoftMask,
ASFixed* pColorValues, ASInt32 numValues);
```

Description

Gets the array of color values of the backdrop color. Given a pointer to an array and the length of the array, copies the color values to that array and returns the number of values copied. If the pointer to the array is **NULL**, the number of color values is returned.

Parameters

pdeSoftMask	An object of type **PDESoftMask**.
pColorValues	*(Filled by the method)* Pointer to an array of color values. If **NULL** , the number of color values is returned.
numValues	Length of the array **pColorValues.**

Read/Write

Read

Return Value

Number of values copied.

Exceptions

None

Notifications

None

Header File

PERCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDESoftMaskGetCosObj

```
void PDESoftMaskGetCosObj (PDESoftMask pdeSoftMask,
CosObj* cosObjP);
```

Description

Gets the associated **CosObj** of the soft mask.

Parameters

pdeSoftMask	The soft mask.
cosObjP	*(Filled by the method)* A pointer to the Cos object.

Read/Write

Read

Return Value

None

Exceptions

peErrWrongPDEObjectType

Notifications

None

Header File

PERCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDESoftMaskGetName

```
ASAtom PDESoftMaskGetName (PDESoftMask pdeSoftMask);
```

Description

Gets the soft mask name.

Parameters

pdeSoftMask	The soft mask.

Read/Write

Read

Return Value

Soft mask name if it is a name; returns **ASAtomNull** otherwise.

Exceptions

None

Notifications

None

Header File

PERCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDESoftMaskGetTransferFunction

```
CosObj PDESoftMaskGetTransferFunction
(PDESoftMask pdeSoftMask);
```

Description

Gets the transfer function as a **CosObj**.

Parameters

pdeSoftMask	The soft mask.

Read/Write

Read

Return Value

The transfer function as a **CosObj**.

Exceptions

None

Notifications

None

Header File

PERCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDESoftMaskSetBackdropColor

```
void PDESoftMaskSetBackdropColor (PDESoftMask pdeSoftMask,
ASFixed* pColorValues, ASInt32 numValues);
```

Description

Sets the backdrop color values.

Parameters

pdeSoftMask	The soft mask object.
pColorValues	An series of color values.
numValues	The number of values pointed to by **pColorValues**.

Read/Write

Write

Return Value

None

Exceptions

None

Notifications

None

Header File

PEWCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDESoftMaskSetTransferFunction

```
void PDESoftMaskSetTransferFunction (PDESoftMask pdeSoftMask,
CosObj cosTransferFunction);
```

Description

Sets the transfer function associated with the soft mask.

Parameters

pdeSoftMask	The soft mask object.
cosTransferFunction	The transfer function dictionary.

Read/Write

Write

Return Value

None

Exceptions

None

Notifications

None

Header File

PEWCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDESoftMaskSetXGroup

```
void PDESoftMaskSetXGroup (PDESoftMask pdeSoftMask,
PDEForm pdeForm);
```

Description

Sets the **PDEForm** that defines the soft mask.

Parameters

pdeSoftMask	The soft mask object.
pdeForm	The form XObject.

Read/Write

Write

Return Value

None

Exceptions

None

Notifications

None

Header File

PEWCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDEShading

PDEShadingCreateFromCosObj

```
PDEShading PDEShadingCreateFromCosObj (const CosObj* shadingP,
ASFixedMatrixP matrixP);
```

Description

Creates a smooth shading object.

Parameters

shadingP	The shading dictionary.
matrixP	The location and transformation matrix of the shading object.

Read/Write

Write

Return Value

A smooth shading object.

Exceptions

peErrUnknownPDEColorSpace
cosErrInvalidObj
cosErrExpectedName
genErrBadParm

Notifications

None

Header File

PEWCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEShadingGetCosObj

```
void PDEShadingGetCosObj (PDEShading shading,
CosObj* cosObjP);
```

Description

Gets the **CosObj** for a **PDEShading**.

Parameters

shading	A smooth shading object.
cosObjP	The Cos dictionary corresponding to **shading**.

Read/Write

Read

Return Value

None

Exceptions

None

Notifications

None

Header File

PERCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEText

PDETextAdd

```
void PDETextAdd (PDEText pdeText, ASUns32 flags,
ASInt32 index, ASUns8* text, ASInt32 textLen, PDEFont font,
PDEGraphicStateP gstateP, ASUns32 gstateLen,
PDETextStateP tstateP, ASUns32 tstateLen,
ASFixedMatrixP textMatrixP, ASFixedMatrixP strokeMatrixP);
```

Description

Adds a character or a text run to a **PDEText** object.

NOTE: This method does not change the reference count of **pdeText**; however, the reference count of the objects in the gstateP are incremented.

Parameters

pdeText	Text object to which a character or text run is added.
flags	A **PDETextFlags** that specifies what kind of text to add. Must be either: **kPDETextChar** — for a text character **kPDETextRun** — for a text run
index	Index after which to add character or text run.
text	Pointer to the characters to add. NOTE: Passing **NULL** for text can invalidate the text object but will not raise an error. Callers must not pass **NULL** for this parameter.
textLen	Length of the text, in bytes.
font	Font for the element.
gstateP	Pointer to a **PDEGraphicState** structure with the graphics state for the element.
gstateLen	Length of graphics state for the element.
tstateP	Pointer to a **PDETextState** structure with text state for the element. NOTE: PDFEdit ignores the **wasSetFlags** flag of the **PDETextState** structure, so you must initialize the **PDETextState** fields.

tstateLen	Length of text state for the element.
textMatrixP	Pointer to **ASFixedMatrix** that holds the matrix for the element.
strokeMatrixP	Pointer to **ASFixedMatrix** that holds the matrix for the line width when stroking text. May be **NULL**.

Read/Write

Write

Return Value

None

Exceptions

pdErrBadResMetrics
peErrWrongPDEObjectType
genErrBadParm

Notifications

None

Header File

PEWCalls.h

Related Methods

PDETextIsAtPoint
PDETextReplaceChars
PDETextSplitRunAt

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDETextCreate

```
PDEText PDETextCreate (void);
```

Description

Creates an empty text object.

Call **PDERelease** to dispose of the returned text object when finished with it.

Parameters

None

Read/Write

Write

Return Value

An empty text object.

Exceptions

None

Notifications

None

Header File

PEWCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDETextGetAdvanceWidth

```
void PDETextGetAdvanceWidth (PDEText pdeText, ASUns32 flags,
ASInt32 index, ASFixedPointP advanceP);
```

Description

Gets the advance width of a character or a text element. Advance width is returned in either character space or page space. The advance width is the amount by which the current point advances when the character is drawn.

Advance width may be horizontal or vertical, depending on the writing style. Thus **advanceP** has both a horizontal and vertical component.

Parameters

pdeText	Text object containing a character or text run whose advance width is found.
flags	A **PDETextFlags** value that specifies whether **index** refers to the character offset from the beginning of the text object or the index of the text run in the text object. Must be either: **kPDETextChar** — for a text character **kPDETextRun** — for a text run In addition, set the **kPDETextPageSpace** flag to obtain the advance width in page space. If it is not set, the advance width is in character space.
index	Index of the character or text run in **pdeText**.
advanceP	*(Filled by the method)* Pointer to a **ASFixedPoint** value indicating the advance width.

Read/Write

Read

Return Value

None

Exceptions

peErrWrongPDEObjectType
genErrBadParm
pdErrBadResMetrics

Notifications

None

Header File

PERCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDETextGetBBox

```
void PDETextGetBBox (PDEText pdeText, ASUns32 flags,
ASInt32 index, ASFixedRectP bboxP);
```

Description

Gets the bounding box of a character or a text run.

Parameters

pdeText	Text object containing a character or text run whose bounding box is found.
flags	A **PDETextFlags** that specifies whether **index** refers to the character offset from the beginning of the text object or the index of the text run in the text object. Must be either: **kPDETextChar** — for a text character **kPDETextRun** — for a text run
index	Index of the character or text run in **pdeText**.
bboxP	*(Filled by the method)* Pointer to **ASFixedRect** to set to the bounding box of specified character or text run.

Read/Write

Read

Return Value

None

Exceptions

peErrWrongPDEObjectType
genErrBadParm
pdErrBadResMetrics

Notifications

None

Header File

PERCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDETextGetFont

```
PDEFont PDETextGetFont (PDEText pdeText, ASUns32 flags,
ASInt32 index);
```

Description

Gets the font for a text character or element.

NOTE: This method does not change the reference count of the returned **PDEFont**.

Parameters

pdeText	Text object containing a character or text run whose font is found.
flags	A **PDETextFlags** that specifies whether **index** refers to the character offset from the beginning of the text object or the index of the text run in the text object. Must be either: **kPDETextChar** — for a text character **kPDETextRun** — for a text run
index	Index of the character or text run in **pdeText**.

Read/Write

Read

Return Value

Font of the specified character or text run.

Exceptions

peErrWrongPDEObjectType
genErrBadParm
pdErrBadResMetrics

Notifications

None

Header File

PERCalls.h

Related Methods

PDETextRunSetFont

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDETextGetGState

```
void PDETextGetGState (PDEText pdeText, ASUns32 flags,
ASInt32 index, PDEGraphicStateP stateP, ASUns32 stateSize);
```

Description

Gets the graphics state of a character or a text run.

NOTE: This method does not increment the reference count of the objects in stateP.

Parameters

pdeText	Text object containing a character or text run whose graphics state is found.
flags	A **PDETextFlags** that specifies whether **index** refers to the character offset from the beginning of the text object or the index of the text run in the text object. Must be either: **kPDETextChar** — for a text character **kPDETextRun** — for a text run
index	Index of the character or text run in **pdeText**.
stateP	*(Filled by the method)* Pointer to a **PDEGraphicState** structure with graphics state of specified character or text run.
stateSize	Size of the **stateP** buffer, in bytes.

Read/Write

Read

Return Value

None

Exceptions

peErrWrongPDEObjectType
genErrBadParm

Notifications

None

Header File

PERCalls.h

Related Methods

PDETextRunSetGState

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDETextGetMatrix

```
void PDETextGetMatrix (PDEText pdeText, ASUns32 flags,
ASInt32 index, ASFixedMatrixP matrixP);
```

Description

Returns the matrix of a character or a text element. Unlike **PDETextGetTextMatrix**, this function doesn't take **fontSize**, **hScale**, and **textRise** in the **textState** into account.

Parameters

pdeText	Text object containing a character or text run whose graphics state is found.
flags	A **PDETextFlags** that specifies whether **index** refers to the character offset from the beginning of the text object or the index of the text run in the text object. Must be either: **kPDETextChar** — for a text character **kPDETextRun** — for a text run
index	Index of the character or text run in **pdeText**.
matrixP	*(Filled by the method)* **ASFixedMatrixP** that holds the matrix of specified character or text run.

Read/Write

Read

Return Value

None

Exceptions

peErrWrongPDEObjectType
genErrBadParm

Notifications

None

Header File

PERCalls.h

Related Methods

PDETextGetTextMatrix

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDETextGetNumBytes

```
ASInt32 PDETextGetNumBytes (PDEText pdeText, ASUns32 flags,
ASInt32 index);
```

Description

Gets the number of bytes occupied by the character code or text run.

Parameters

pdeText	A **PDEText** object returned from one of the **PDETextCreate** methods whose text is examined.
flags	A **PDETextFlags** that specifies whether **index** refers to the character offset from the beginning of the text object or the index of the text run in the text object. Must be either: **kPDETextChar** — for a text character **kPDETextRun** — for a text run
index	Index of the character or text run in **pdeText**.

Read/Write

Read

Return Value

Number of bytes occupied by the text run or character.

Exceptions

peErrWrongPDEObjectType
genErrBadParm

Notifications

None

Header File

PERCalls.h

Related Methods

PDEFontGetNumCodeBytes

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDETextGetNumChars

```
ASInt32 PDETextGetNumChars (PDEText pdeText);
```

Description

Gets the number of characters in a text object.

Parameters

pdeText	Text object whose number of characters is found.

Read/Write

Read

Return Value

Total number of characters in **pdeText**.

Exceptions

peErrWrongPDEObjectType
genErrBadParm

Notifications

None

Header File

PERCalls.h

Related Methods

PDETextGetNumRuns
PDETextGetRunForChar

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDETextGetNumRuns

```
ASInt32 PDETextGetNumRuns (PDEText pdeText);
```

Description

Gets the number of text runs (show strings) in a text object.

Parameters

pdeText	Text object whose number of text runs is found.

Read/Write

Read

Return Value

Number of text runs in **pdeText**.

Exceptions

peErrWrongPDEObjectType

Notifications

None

Header File

PERCalls.h

Related Methods

PDETextGetNumBytes
PDETextGetRunForChar

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDETextGetQuad

```
void PDETextGetQuad (PDEText pdeText, ASUns32 flags,
ASInt32 index, ASFixedQuadP quadP);
```

Description

Gets the quad bounding the specified text run or character.

The advance portion of the quad is based on the left side bearing and advance width.

Parameters

pdeText	Text object containing a character or text run whose quad is found.
flags	A **PDETextFlags** that specifies whether **index** refers to the character offset from the beginning of the text object or the index of the text run in the text object. Must be either: **kPDETextChar** — for a text character **kPDETextRun** — for a text run In addition, if the **kPDETextBounding** flag is set, **PDETextGetQuad** uses the font descriptor's **FontBBox**, which is the smallest rectangle that encloses all characters in the font. The advance portion is based on the *x*-coordinates of the left and right sides of **FontBBox** and the advance width.
index	Index of the character or text run in **pdeText**.
quadP	*(Filled by the method)* Pointer to **ASFixedQuad** that bounds the specified character or text run.

Read/Write

Read

Return Value

None

Exceptions

peErrWrongPDEObjectType
genErrBadParm
pdErrBadResMetrics

Notifications

None

Header File

PERCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDETextGetRunForChar

```
ASInt32 PDETextGetRunForChar (PDEText pdeText,
ASInt32 charIndex);
```

Description

Gets the index of the text run that contains the n^{th} character in a text object.

Parameters

pdeText	Text object to examine.
charIndex	Number of the character to find in **pdeText**.

Read/Write

Read

Return Value

Index of the text run with the specified character index into **pdeText**.

Exceptions

peErrWrongPDEObjectType
genErrBadParm

Notifications

None

Header File

PERCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDETextGetState

```
void PDETextGetState (PDEText pdeText, ASUns32 flags,
ASInt32 index, PDETextStateP stateP, ASUns32 stateSize);
```

Description

Returns the text state of a character or a text element.

Parameters

pdeText	Text object containing a character or text run whose text state is found.
flags	A **PDETextFlags** that specifies whether **index** refers to the character offset from the beginning of the text object or the index of the text run in the text object. Must be either: **kPDETextChar** — for a text character **kPDETextRun** — for a text run
index	Index of the character or text run in **pdeText**.
stateP	*(Filled by the method)* Pointer to a **PDETextState** structure to fill with the text state of the specified character or text run.
stateSize	Size of the **stateP** buffer, in bytes.

Read/Write

Read

Return Value

None

Exceptions

genErrBadParm
peErrWrongPDEObjectType

Notifications

None

Header File

PERCalls.h

Related Methods

PDETextRunSetTextState
PDETextGetTextState

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDETextGetStrokeMatrix

```
void PDETextGetStrokeMatrix (PDEText pdeText, ASUns32 flags,
ASInt32 index, ASFixedMatrixP matrixP);
```

Description

Gets the stroke matrix of a character or a text run.

Parameters

pdeText	Text object containing a character or text run whose stroke matrix is found.
flags	A **PDETextFlags** that specifies whether **index** refers to the character offset from the beginning of the text object or the index of the text run in the text object. Must be either: **kPDETextChar** — for a text character **kPDETextRun** — for a text run
index	Index of the character or text run in **pdeText**.
matrixP	*(Filled by the method)* Pointer to **ASFixedMatrix** that holds the stroke matrix of specified character or text run. This matrix is the transformation for line widths when stroking. The **h** and **v** values of the matrix are ignored.

Read/Write

Read

Return Value

None

Exceptions

peErrWrongPDEObjectType
genErrBadParm

Notifications

None

Header File

PERCalls.h

Related Methods

PDETextRunSetStrokeMatrix

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDETextGetText

```
ASInt32 PDETextGetText (PDEText pdeText, ASUns32 flags,
ASInt32 index, ASUns8* textBuffer);
```

Description

Gets the text for a text run or character.

Parameters

pdeText	Text object containing a character or text run whose text is found.
flags	A **PDETextFlags** that specifies whether **index** refers to the character offset from the beginning of the text object or the index of the text run in the text object. Must be either: **kPDETextChar** — for a text character **kPDETextRun** — for a text run
index	Index of the character or text run in **pdeText**.
textBuffer	*(Filled by the method)* Text of specified character or text run. **textBuffer** must be large enough to hold the returned text. If **textBuffer** is **NULL**, returns the number of bytes required to hold the data.

Read/Write

Read

Return Value

Number of bytes in text run or character.

Exceptions

genErrBadParm
peErrWrongPDEObjectType

Notifications

None

Header File

PERCalls.h

Related Methods

PDETextGetTextMatrix
PDETextGetTextState

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDETextGetTextMatrix

```
void PDETextGetTextMatrix (PDEText pdeText, ASUns32 flags,
ASInt32 index, ASFixedMatrixP matrixP);
```

Description

Gets the matrix of a character or a text run.

Parameters

pdeText	Text object containing a character or text run whose matrix is found.
flags	A **PDETextFlags** that specifies whether **index** refers to the character offset from the beginning of the text object or the index of the text run in the text object. Must be either: **kPDETextChar** — for a text character **kPDETextRun** — for a text run
index	Index of the character or text run in **pdeText**.
matrixP	*(Filled by the method)* Pointer to **ASFixedMatrix** that holds the matrix of specified character or text run. This is the transformation matrix from page space to the current text space. The **h** and **v** values of the matrix indicate the origin of the first character.

Read/Write

Read

Return Value

None

Exceptions

peErrWrongPDEObjectType
genErrBadParm
pdErrBadResMetrics

Notifications

None

Header File

PERCalls.h

Related Methods

PDETextRunSetTextMatrix

PDETextGetMatrix

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDETextGetTextState

```
void PDETextGetTextState (PDEText pdeText, ASUns32 flags,
ASInt32 index, PDETextStateP stateP, ASUns32 stateSize);
```

Description

Gets the text state of a character or a text element.

NOTE: This function handles only **charSpacing**, **wordSpacing**, and **renderMode** for backward compatibility. For all attributes, use **PDETextGetState** instead.

Parameters

pdeText	Text object containing a character or text run whose text state is found.
flags	A **PDETextFlags** that specifies whether **index** refers to the character offset from the beginning of the text object or the index of the text run in the text object. Must be either: **kPDETextChar** — for a text character **kPDETextRun** — for a text run
index	Index of the character or text run in **pdeText**.
stateP	*(Filled by the method)* Pointer to a **PDETextState** structure to fill with the text state of the specified character or text run.
stateSize	Size of the **stateP** buffer, in bytes.

Read/Write

Read

Return Value

None

Exceptions

peErrWrongPDEObjectType
genErrBadParm

Notifications

None

Header File

PERCalls.h

Related Methods

PDETextGetState

PDETextRunSetTextState

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDETextIsAtPoint

```
ASBool PDETextIsAtPoint (PDEText pdeText, ASUns32 flags,
ASInt32 index, ASFixedPoint point);
```

Description

Tests whether a point is on specified text. Checks if the point is in a bounding box for the **PDEText**.

Parameters

pdeText	The text to test.
flags	A **PDETextFlags** that specifies whether **index** refers to the character offset from the beginning of the text object or the index of the text run in the text object. Must be either: **kPDETextChar** — for a text character **kPDETextRun** — for a text run
index	Index of the character or text run in **pdeText**.
point	The point, specified in user space coordinates.

Return Value

true if the point is on the text, **false** otherwise.

Exceptions

None

Notifications

None

Header File

PERCalls.h

Related Methods

PDEElementIsAtPoint
PDEElementIsAtRect

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDETextIsAtRect

```
ASBool PDETextIsAtRect (PDEText pdeText, ASUns32 flags,
ASInt32 index, ASFixedRect rect);
```

Description

Tests whether any part of a rectangle is on the specified text.

Parameters

pdeText	The text to test.
flags	A **PDETextFlags** flag that specifies whether **index** refers to the character offset from the beginning of the text object or the index of the text run in the text object. Must be either: **kPDETextChar** — for a text character **kPDETextRun** — for a text run
index	Index of the character or text run in **pdeText**.
rect	The rectangle, specified in user space coordinates.

Return Value

true if the text is on the rectangle, **false** otherwise.

Exceptions

None

Notifications

None

Header File

PERCalls.h

Related Methods

PDEElementIsAtPoint
PDEElementIsAtRect
PDETextIsAtPoint

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDETextRemove

```
void PDETextRemove (PDEText pdeText, ASUns32 flags,
ASInt32 index, ASInt32 count);
```

Description

Removes characters or text runs from a text object.

NOTE: This method decrements the reference count of **objects associated with the pdeText in the graphic state and font**.

Parameters

pdeText	Text object from which text is removed.
flags	A **PDETextFlags** that specifies whether **index** refers to the character offset from the beginning of the text object or the index of the text run in the text object. Must be either: **kPDETextChar** — for a text character **kPDETextRun** — for a text run
index	Index of the character or text run in **pdeText**.
count	Number of characters or text runs to remove.

Read/Write

Write

Return Value

None

Exceptions

peErrWrongPDEObjectType
genErrBadParm
pdErrBadResMetrics

Notifications

None

Header File

PEWCalls.h

Related Methods

PDETextAdd
PDETextReplaceChars
PDETextSplitRunAt

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDETextReplaceChars

```
void PDETextReplaceChars (PDEText pdeText, ASUns32 flags,
ASInt32 index, ASUns8* textBuffer, ASInt32 numBytes);
```

Description

Replaces characters in a text object.

This method does not change the number of characters in the text object—extra characters are ignored.

Parameters

pdeText	Text object in which characters are replaced.
flags	A **PDETextFlags** that specifies whether **index** refers to the character offset from the beginning of the text object or the index of the text run in the text object. Must be either: **kPDETextChar** — for a text character **kPDETextRun** — for a text run
index	Index of the character or text run in **pdeText**.
textBuffer	Replacement text.
numBytes	Number of bytes to replace.

Read/Write

Write

Return Value

None

Exceptions

peErrWrongPDEObjectType
genErrBadParm

Notifications

None

Header File

PEWCalls.h

Related Methods

PDETextAdd
PDETextIsAtPoint
PDETextSplitRunAt

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDETextRunGetCharOffset

```
ASInt32 PDETextRunGetCharOffset (PDEText pdeText,
ASInt32 runIndex);
```

Description

Gets the character offset of the first character of the specified text run.

Parameters

pdeText	Text object containing a character or text run whose graphics state is found.
runIndex	Index of the text run whose first character's index is returned.

Read/Write

Read

Return Value

Character offset of the first character of the specified text run in **pdeText**.

Exceptions

peErrWrongPDEObjectType
genErrBadParm

Notifications

None

Header File

PERCalls.h

Related Methods

PDETextGetNumBytes
PDETextGetNumRuns
PDETextGetRunForChar

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDETextRunGetNumChars

```
ASInt32 PDETextRunGetNumChars (PDEText pdeText,
ASInt32 runIndex);
```

Description

Gets the number of characters in a text run.

Parameters

pdeText	Text object containing a text run whose number of characters is found.
runIndex	Index of the text run whose number of characters is returned.

Read/Write

Read

Return Value

Number of characters in the specified text run.

Exceptions

peErrWrongPDEObjectType
genErrBadParm

Notifications

None

Header File

PERCalls.h

Related Methods

PDETextGetNumRuns
PDETextGetRunForChar
PDETextRunGetCharOffset

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDETextRunSetFont

```
void PDETextRunSetFont (PDEText pdeText, ASInt32 runIndex,
PDEFont font);
```

Description

Sets the font of a text run.

NOTE: This method decrements the reference count of the previous font and increments the reference count of the new font.

Parameters

pdeText	Text object containing a text run whose font is set.
runIndex	Index of the text run.
font	Font set for the text run.

Read/Write

Write

Return Value

None

Exceptions

peErrWrongPDEObjectType
genErrBadParm

Notifications

None

Header File

PEWCalls.h

Related Methods

PDETextGetFont

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDETextRunSetGState

```
void PDETextRunSetGState (PDEText pdeText, ASInt32 runIndex,
PDEGraphicStateP stateP, ASUns32 stateSize);
```

Description

Sets the graphics state of a text run.

NOTE: This method increments the reference count of objects in the **stateP**.

Parameters

pdeText	Text object containing a text run whose graphics state is set.
runIndex	Index of the text run.
stateP	Pointer to a **PDEGraphicState** structure with graphics state to set.
stateSize	Size of the **stateP** buffer, in bytes.

Read/Write

Write

Return Value

None

Exceptions

peErrWrongPDEObjectType
genErrBadParm

Notifications

None

Header File

PEWCalls.h

Related Methods

PDETextGetGState

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDETextRunSetMatrix

```
void PDETextRunSetMatrix (PDEText pdeText, ASInt32 runIndex,
ASFixedMatrixP matrixP);
```

Description

Sets the matrix of a text run. Unlike **PDETextRunSetTextMatrix**, this function doesn't change **fontSize**, **hScale**, and **textRise** in the **textState** of **PDEText**.

Parameters

pdeText	Text object containing a text run.
runIndex	Index of the text run.
matrixP	**ASFixedMatrixP** pointer.

Read/Write

Write

Return Value

None

Exceptions

peErrWrongPDEObjectType
genErrBadParm

Notifications

None

Header File

PEWCalls.h

Related Methods

PDETextRunSetTextMatrix

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDETextRunSetState

```
void PDETextRunSetState (PDEText pdeText, ASInt32 runIndex,
PDTextStateP stateP, ASUns32 stateSize);
```

Description

Sets the text state of a text run.

Parameters

pdeText	Text object containing a text run whose state is set.
runIndex	Index of the text run.
stateP	Pointer to a **PDETextState** structure with state to set.
stateSize	Size of the **stateP** buffer, in bytes.

Read/Write

Write

Return Value

None

Exceptions

peErrWrongPDEObjectType
genErrBadParm

Notifications

None

Header File

PEWCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDETextRunSetStrokeMatrix

```
void PDETextRunSetStrokeMatrix (PDEText pdeText,
ASInt32 runIndex, ASFixedMatrixP matrixP);
```

Description

Sets the stroke matrix of a text run.

Parameters

pdeText	Text object containing a text run whose stroke matrix is set.
runIndex	Index of the text run.
matrixP	Pointer to **ASFixedMatrix** that holds the stroke matrix.

Read/Write

Write

Return Value

None

Exceptions

peErrWrongPDEObjectType
genErrBadParm

Notifications

None

Header File

PEWCalls.h

Related Methods

PDETextGetStrokeMatrix

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDETextRunSetTextMatrix

```
void PDETextRunSetTextMatrix (PDEText pdeText,
ASInt32 runIndex, ASFixedMatrixP matrixP);
```

Description

Sets the text matrix of a text run.

Parameters

pdeText	Text object containing a text run whose text matrix is set.
runIndex	Index of the text run.
matrixP	Pointer to **ASFixedMatrix** that holds the text matrix.

Read/Write

Write

Return Value

None

Exceptions

peErrWrongPDEObjectType
genErrBadParm

Notifications

None

Header File

PEWCalls.h

Related Methods

PDETextGetTextMatrix
PDETextRunSetMatrix

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDETextRunSetTextState

```
void PDETextRunSetTextState (PDEText pdeText,
ASInt32 runIndex, PDETextStateP stateP, ASUns32 stateSize);
```

Description

Sets the text state of a text run.

Parameters

pdeText	Text object containing a text run whose text state is set.
runIndex	Index of the text run.
stateP	Pointer to a **PDETextState** structure with text state.
stateSize	Size of the **stateP** buffer, in bytes.

Read/Write

Write

Return Value

None

Exceptions

peErrWrongPDEObjectType
genErrBadParm

Notifications

None

Header File

PEWCalls.h

Related Methods

PDETextGetTextState

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDETextSplitRunAt

```
void PDETextSplitRunAt (PDEText pdeText, ASInt32 splitLoc);
```

Description

Splits a text run into two text runs.

Parameters

pdeText	Text object containing a text run to split.
splitLoc	Split location. **splitLoc** is relative to the text object. The first text run is from character index 0 up to **splitLoc**. The second text run is from **splitLoc** + 1 to the end of the run.

Read/Write

Write

Return Value

None

Exceptions

peErrWrongPDEObjectType
genErrBadParm
pdErrBadResMetrics

Notifications

None

Header File

PEWCalls.h

Related Methods

PDETextIsAtPoint
PDETextReplaceChars

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEUnknown

PDEUnknownGetOpName

```
ASAtom PDEUnknownGetOpName (PDEUnknown pdeUnknown);
```

Description

Gets the operator name of an unknown operator.

Parameters

pdeUnknown	Unknown element whose operator name is obtained.

Read/Write

Read

Return Value

An **ASAtom** for the name of the operator for **pdeUnknown.**

Exceptions

None

Notifications

None

Header File

PEWCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEXGroup

PDEXGroupAcquireColorSpace

```
PDEColorSpace PDEXGroupAcquireColorSpace
(PDEXObject pdeXGroup);
```

Description

Acquires the color space of the transparency group.

Parameters

pdeXGroup	An object of type **PDEXObject**.

Read/Write

Read

Return Value

The color space; otherwise **NULL**.

Exceptions

None

Notifications

None

Header File

PERCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDEXGroupCreate

```
PDEXGroup PDEXGroupCreate (CosDoc doc,
PDEXGroupCreateFlags type);
```

Description

Create a new XGroup of the given type.

Parameters

doc	The document the object will be created in.
type	Must be **kPDEXGroupTypeTransparency**.

Read/Write

Read

Return Value

The newly created object.

Exceptions

None

Notifications

None

Header File

PEWCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDEXGroupCreateFromCosObj

```
PDEXGroup PDEXGroupCreateFromCosObj (const CosObj* cosObjP);
```

Description

Creates a new XGroup object from its Cos representation.

Parameters

cosObjP	The XGroup object dictionary.

Read/Write

Write

Return Value

The **PDEXGroup** object.

Exceptions

None

Notifications

None

Header File

PEWCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDEXGroupGetCosObj

```
void PDEXGroupGetCosObj (PDEXGroup pdeXGroup,
CosObj* cosObjP);
```

Description

Gets the **CosObj** of the transparency group.

Parameters

pdeXGroup	Transparency group.
cosObjP	*(Filled by the method)* Pointer to the Cos object.

Read/Write

Read

Return Value

None

Exceptions

genErrBadParm
peErrWrongPDEObjectType

Notifications

None

Header File

PERCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDEXGroupGetIsolated

```
ASBool PDEXGroupGetIsolated (PDEXObject pdeXGroup);
```

Description

Gets the isolated boolean value of the transparency group.

Parameters

pdeXGroup	An object of type **PDEXObject**.

Read/Write

Read

Return Value

true if the transparency group is isolated; **false** otherwise.

Exceptions

peErrWrongPDEObjectType

Notifications

None

Header File

PERCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDEXGroupGetKnockout

```
ASBool PDEXGroupGetKnockout (PDEXObject pdeXGroup);
```

Description

Gets the knockout boolean value of the transparency group.

Parameters

pdeXGroup	An object of type **PDEXObject**.

Read/Write

Read

Return Value

The knockout value.

Exceptions

peErrWrongPDEObjectType

Notifications

None

Header File

PERCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDEXGroupSetColorSpace

```
void PDEXGroupSetColorSpace (PDEXObject pdeXGroup,
PDEColorSpace pdeColorSpace);
```

Description

Sets the **PDEXObject** that defines the color space into which colors are converted when painted into this group.

Parameters

pdeXGroup	The XGroup object.
pdeColorSpace	The color space to associate with the XGroup.

Read/Write

Write

Return Value

None

Exceptions

None

Notifications

None

Header File

PEWCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDEXGroupSetIsolated

```
void PDEXGroupSetIsolated (PDEXGroup pdeXGroup,
ASBool isolated);
```

Description

Sets the XGroup to be isolated or not. Corresponds to the **/I** key within the XGroup's dictionary.

Parameters

pdeXGroup	The transparency group object.
isolated	**true** to isolate the XGroup, **false** otherwise.

Read/Write

Write

Return Value

None

Exceptions

None

Notifications

None

Header File

PEWCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDEXGroupSetKnockout

```
void PDEXGroupSetKnockout (PDEXObject pdeXGroup,
ASBool knockout);
```

Description

Sets the knockout value.

Parameters

pdeXGroup	The transparency group object.
knockout	The knockout value.

Read/Write

Write

Return Value

None

Exceptions

None

Notifications

None

Header File

PEWCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDEXObject

PDEXObjectCreate

```
PDEXObject PDEXObjectCreate (const CosObj* cosObjP);
```

Description

Creates a new **PDEXObject** from a Cos object.

Call **PDERelease** to dispose of the returned **PDEXObject** when finished with it.

Parameters

cosObjP	Cos object for the **PDEXObject**.

Read/Write

Write

Return Value

PDEXObject corresponding to the **cosObjP**.

Exceptions

None

Notifications

None

Header File

PEWCalls.h

Related Methods

PDEXObjectGetCosObj

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEXObjectGetCosObj

```
void PDEXObjectGetCosObj (PDEXObject xObject,
CosObj* cosObjP);
```

Description

Gets a Cos object corresponding to a **PDEXObject**.

Parameters

xObject	The **PDEXObject** whose Cos object is obtained.
cosObjP	*(Filled by the method)* Cos object for **xObject**.

Read/Write

Read

Return Value

None

Exceptions

peErrWrongPDEObjectType

Notifications

None

Header File

PERCalls.h

Related Methods

PDEXObjectCreate

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDSysEncoding

PDSysEncodingCreateFromBaseName

```
PDSysEncoding PDSysEncodingCreateFromBaseName
(ASAtom baseEncName, const char** diffEnc);
```

Description

Create an encoding object from base name.

Parameters

baseEncName	The base encoding. See Section 5.5.5 in the *PDF Reference*.
diffEnc	Array of 256 **const char*** describing the differences from the encoding specified by **baseEncName**. May be **NULL**.

Read/Write

Write

Return Value

An object of type **PDSysEncoding**.

Exceptions

genErrBadParm

Notifications

None

Header File

PEWCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDSysEncodingCreateFromCMapName

```
PDSysEncoding PDSysEncodingCreateFromCMapName
(ASAtom cmapName);
```

Description

Create an encoding object from CMap name.

Parameters

cmapName	CMap name.

Read/Write

Write

Return Value

An object of type **PDSysEncoding**.

Exceptions

genErrBadParm

Notifications

None

Header File

PEWCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDSysEncodingGetWMode

```
ASInt16 PDSysEncodingGetWMode (PDSysEncoding sysEnc);
```

Description

Returns writing mode. **0** for horizontal writing and **1** for vertical writing.

Parameters

sysEnc	An object of type **PDSysEncoding**.

Read/Write

Read

Return Value

0 for horizontal writing and **1** for vertical writing.

Exceptions

peErrWrongPDEObjectType

Notifications

None

Header File

PERCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDSysEncodingIsIdentity

```
ASBool PDSysEncodingIsIdentity (PDSysEncoding sysEnc);
```

Description

Returns **true** for Identity-H or Identity-V encoding; **false** otherwise.

Parameters

sysEnc	An object of type **PDSysEncoding**.

Read/Write

Read

Return Value

See above.

Exceptions

peErrWrongPDEObjectType

Notifications

None

Header File

PERCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDSysEncodingIsMultiByte

```
ASBool PDSysEncodingIsMultiByte (PDSysEncoding sysEnc);
```

Description

Returns **true** for CMap encoding; **false** otherwise.

Parameters

sysEnc	An object of type **PDSysEncoding**.

Read/Write

Read

Return Value

See above.

Exceptions

peErrWrongPDEObjectType

Notifications

None

Header File

PERCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDSysFont

PDEmbedSysFontForPDEFont

```
void PDEmbedSysFontForPDEFont (PDEFont font, ASUns32 flags,
CosDoc cosDoc);
```

Description

If there is a font on the system that matches this **PDEFont**, embed the full font, regardless of whether it was subsetted or not embedded at all in the first place. This will not work for CID fonts, because they must be subsetted.

The matching is based on the **PDSysFontMatchFlags**.

Only the font object itself is modified—no content streams are changed.

NOTE: This method does not change the reference count of the font.

Parameters

font	A **PDEFont** object returned from one of the **PDEFontCreate** methods.
flags	Flags from **PDSysFontMatchFlags** that determine matches.
cosDoc	Currently unused.

Return Value

None

Exceptions

Raises **peErrFontToEmbedNotOnSys** if there is no system font that matches this **PDEFont**.
Raises **genErrBadParm** if the **PDEFont** is a CID font.
peErrCantCreateFontSubset
peErrCantGetAttrs
peErrCantGetWidths

Notifications

None

Header File

PSFCalls.h

Related Methods

PDEFontCreateFromSysFont

PDFindSysFontForPDEFont

Availability

Available if **PI_PDSYSFONT_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDEnumSysFonts

```
void PDEnumSysFonts (PDSysFontEnumProc enumProc,
void* clientData);
```

Description

Enumerates all of the system fonts with a user-supplied procedure.

The **PDSysFont** must be acquired during the enumeration if the font is needed beyond the **enumProc**.

Developers should *not* assume that the **enumProc** will get called. If no system fonts are found (for example, if the **PSRESOURCEPATH** environment variable is not set on UNIX platforms), **enumProc** is never called, and **PDEnumSysFonts** does not raise an exception.

NOTE: The font names that are returned from the methods **PDEnumSysFonts** and **PDSysFontsGetAttrs** are different in 5.0 (compared to 4.05). The differences are shown in the table below.

Acrobat 4.05		Acrobat 5.0	
Name	**PSname**	**Name**	**Psname**
MS-Mincho	**NULL**	MSMincho	MS-Mincho
MS-Gothic	**NULL**	MSGothic	MS-Gothic
MS-PMincho	**NULL**	MSPMincho	MS-PMincho
MS-PGothic	**NULL**	MSPGothic	MS-PGothic
MS-UIGothic	**NULL**	MSUIGothic	MS-UIGothic

Parameters

enumProc	User-supplied callback to call once for each system font. Enumeration continues until all fonts have been enumerated, or until **enumProc** returns **false**.
clientData	Pointer to user-supplied data to pass to **enumProc** each time it is called.

Read/Write

Write

Return Value

None

Exceptions

None

Notifications

None

Header File

PSFCalls.h

Related Methods

PDFindSysFont
PDFindSysFontForPDEFont

Availability

Available if **PI_PDSYSFONT_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDFindSysFont

```
PDSysFont PDFindSysFont (PDEFontAttrsP attrs,
ASUns32 attrsSize, ASUns32 flags);
```

Description

Finds a system font that matches the requested attributes.

The method gets the **PDSysFont** rather than acquires it, so do *not* call **PDERelease** on the returned **PDSysFont** when done with it.

Parameters

attrs	Pointer to a **PDEFontAttrs** structure with the attributes of the font you are searching for.
attrsSize	Size of the **attrs** buffer, in bytes.
flags	Flags from **PDSysFontMatchFlags**.

Read/Write

Write

Return Value

The desired system font.

Exceptions

None

Notifications

None

Header File

PSFCalls.h

Related Methods

PDEnumSysFonts
PDFindSysFontForPDEFont
PDFindSysFontEx

Availability

Available if **PI_PDSYSFONT_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDFindSysFontEx

```
PDSysFont PDFindSysFontEx (PDEFontAttrsP attrs,
ASUns32 attrsSize, ASUns32 flags, ASFixed* mmDesignVector,
ASInt32* designVecLength);
```

Description

Finds a system font that matches the requested attributes.

If the requested font is a multiple master font instance, the base font is returned, and the specified design vector is decoded and returned in **mmDesignVector**.

The method gets the **PDSysFont** rather than acquires it, so do *not* call **PDERelease** on the returned **PDSysFont** when done with it.

Parameters

attrs	Pointer to a **PDEFontAttrs** structure with the attributes of the font you are searching for.
attrsSize	Size of the **attrs** buffer, in bytes.
flags	Flags from **PDSysFontMatchFlags**.
mmDesignVector	*(Filled by the method)* If the requested font is a multiple master font instance, the specified design vector is decoded and returned in **mmDesignVector**.
designVecLength	*(Filled by the method)* Pass the length of **mmDesignVector**. This parameter also returns the number of elements filled in **mmDesignVector** (maximum = 4).

Read/Write

Write

Return Value

The desired system font.

Exceptions

None

Notifications

None

Header File

PSFCalls.h

Related Methods

PDEnumSysFonts
PDFindSysFont
PDFindSysFontForPDEFont

Availability

Available if **PI_PDSYSFONT_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDFindSysFontForPDEFont

```
PDSysFont PDFindSysFontForPDEFont (PDEFont font,
ASUns32 flags);
```

Description

Find a system font that matches the requested **PDEFont**.

The method gets the **PDSysFont** rather than acquires it, so do *not* call **PDERelease** on the returned **PDSysFont** when done with it.

Parameters

font	A **PDEFont** whose matching system font is found.
flags	Bit field comprised of **PDSysFontMatchFlags** values. • **kPDSysFontMatchNameAndCharSet** • **kPDSysFontMatchFontType** • **PDSysFontMatchFlags** Passing zero matches font by name only.

Read/Write

Write

Return Value

The system font corresponding to **font**.

Exceptions

peErrCantGetAttrs
genErrBadParm
genErrResourceLoadFailed

Notifications

None

Header File

PSFCalls.h

Related Methods

PDFindSysFont

Availability

Available if **PI_PDSYSFONT_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDSysFontAcquirePlatformData

```
PDSysFontPlatDataP PDSysFontAcquirePlatformData
(PDSysFont sysFont);
```

Description

Acquires platform-specific data for use by user interface code. Must be released when finished by **PDSysFontReleasePlatformData**.

Parameters

sysFont	**A PDSysFont** object referencing a system font returned by either **PDFindSysFont** or **PDFindSysFontForPDEFont**.

Return Value

Pointer to a platform-dependent structure **PDSysFontPlatData** containing information relating to a system font. Returns **NULL** if out of memory.

Exceptions

None

Notifications

None

Header File

PSFCalls.h

Related Methods

PDSysFontReleasePlatformData

Availability

Available if **PI_PDSYSFONT_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDSysFontGetAttrs

```
void PDSysFontGetAttrs (PDSysFont sysFont,
PDEFontAttrsP attrsP, ASUns32 attrsSize);
```

Description

Gets the attributes of a system font.

The attributes will be returned in the buffer pointed to by **attrsP**.

No more than **attrsSize** bytes will be written to the buffer.

This call can be expensive to execute, as it may involve parsing the font in order to determine attributes.

NOTE: The font names that are returned from the methods **PDEnumSysFonts** and **PDSysFontsGetAttrs** are different in 5.0 (compared to 4.05). The differences are shown in the table below.

Acrobat 4.05		Acrobat 5.0	
Name	**PSname**	**Name**	**Psname**
MS-Mincho	**NULL**	MSMincho	MS-Mincho
MS-Gothic	**NULL**	MSGothic	MS-Gothic
MS-PMincho	**NULL**	MSPMincho	MS-PMincho
MS-PGothic	**NULL**	MSPGothic	MS-PGothic
MS-UIGothic	**NULL**	MSUIGothic	MS-UIGothic

Parameters

sysFont	**A PDSysFont** object referencing a system font whose attributes are obtained.
attrsP	*(Filled by the method)* Pointer to a **PDEFontAttrs** structure with the attributes of a system font.
attrsSize	Size of the **attrsP** buffer, in bytes.

Read/Write

Write

Return Value

None

Exceptions

peErrCantGetAttrs

Notifications

None

Header File

PSFCalls.h

Related Methods

PDSysFontGetEncoding
PDSysFontGetInfo
PDSysFontGetName
PDSysFontGetType0Widths

Availability

Available if **PI_PDSYSFONT_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDSysFontGetCIDSystemInfo

```
void PDSysFontGetCIDSystemInfo (PDSysFont sysFont,
ASAtom* registry, ASAtom* ordering, ASInt32* supplement);
```

Description

Derives the registry, ordering, and supplement information of a multi-byte system font. This information can be used to create a **PDEFont** from a system font. For more information on CID fonts, see **PDFontGetCIDSystemInfo.**

Parameters

sysFont	**A PDSysFont** object referencing a multibyte system font.
registry	*(Filled by the method)* The **ASAtom** representing the CIDFont's Registry information, as in "Adobe".
ordering	*(Filled by the method)* The **ASAtom** representing the CIDFont's Ordering information, for example, "Japan1".
supplement	*(Filled by the method)* The **SystemSupplement** field from the CIDFont.

Return Value

None

Exceptions

None

Notifications

None

Header File

PSFCalls.h

Related Methods

PDFontGetCIDSystemInfo
PDFontGetCIDSystemSupplement

Availability

Available if **PI_PDSYSFONT_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDSysFontGetCreateFlags

```
ASInt32 PDSysFontGetCreateFlags (PDSysFont sysFont,
PDSysEncoding sysEnc);
```

Description

This function returns a **createFlags** that can be passed to **PDEFontCreateFromSysFontAndEncoding**. If the combination of **sysFont** and **sysEnc** is not allowed, **-1** is returned.

Parameters

sysFont	An object of type **PDSysFont**.
sysEnc	An object of type **PDSysEncoding**.

Return Value

See above.

Exceptions

peErrWrongPDEObjectType

Notifications

None

Header File

PEWCalls.h

Related Methods

None

Availability

Available if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDSysFontGetEncoding

```
ASUns8** PDSysFontGetEncoding (PDSysFont sysFont,
ASAtom* encodingNameP);
```

Description

Gets the encoding of a single byte encoded system font.

The returned encoding must be freed via a call to **ASfree**.

Parameters

sysFont	**A PDSysFont** object referencing a system font whose encoding is obtained.
encodingNameP	*(Filled by the method)* An encoding name if the return value of **PDSysFontGetEncoding** is zero. If **encodingNameP** is the **NULL ASAtom**, the font uses its default encoding.

Read/Write

Write

Return Value

An encoding array of 256 C strings. Each entry in the array either contains a glyph name or **NULL**. If it is **NULL**, the corresponding entry uses the font's built in encoding value.

If the return value is zero, **encodingNameP** contains the name of the encoding.

- For a Type 1 font, the default encoding is that specified by the **Encoding** value in the font dictionary.
- For a TrueType font, the default encoding is that specified in the single byte CMAP table.

Exceptions

None

Notifications

None

Header File

PSFCalls.h

Related Methods

PDSysFontAcquirePlatformData
PDSysFontGetInfo

PDSysFontGetName
PDSysFontGetType0Widths

Availability

Available if **PI_PDSYSFONT_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDSysFontGetInfo

```
void PDSysFontGetInfo (PDSysFont sysFont, PDEFontInfoP infoP,
ASUns32 infoSize);
```

Description

Gets high-level information about a system font.

Parameters

sysFont	**A PDSysFont** object referencing a system font whose information is obtained.
infoP	*(Filled by the method)* Pointer to **PDEFontInfoRec** structure to fill with font information for **sysFont**. No more than **infoSize** bytes are written to this buffer.
infoSize	Size of the **infoP** buffer, in bytes.

Read/Write

Write

Return Value

None

Exceptions

None

Notifications

None

Header File

PSFCalls.h

Related Methods

PDSysFontAcquirePlatformData
PDSysFontGetEncoding
PDSysFontGetName
PDSysFontGetType0Widths

Availability

Available if **PI_PDSYSFONT_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDSysFontGetName

```
ASAtom PDSysFontGetName (PDSysFont sysFont);
```

Description

Gets the PostScript or TrueType styled name for a system font.

Parameters

sysFont	**A PDSysFont** object referencing a system font whose name is obtained.

Read/Write

Write

Return Value

The **ASAtom** for the system font's name.

Exceptions

None

Notifications

None

Header File

PSFCalls.h

Related Methods

PDSysFontAcquirePlatformData
PDSysFontGetEncoding
PDSysFontGetInfo
PDSysFontGetType0Widths

Availability

Available if **PI_PDSYSFONT_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDSysFontGetType0Widths

```
void PDSysFontGetType0Widths (PDSysFont sysFont,
ASAtom ordering, ASBool* hasDW, ASInt32* dw, CosObj* w,
ASBool* hasdw2, ASInt32* dw2, CosObj* w2);
```

Description

Gets width information from a Type 0 system font. This information can be used to create a **PDEFont** from a system font.

NOTE: In general, you are discouraged from using this method. Instead use **PDEFontCreateFromSysFontAndEncoding** followed by **PDEFontCreateWidthsNow** to create the **W** entry in a font.

Parameters

sysFont	**A PDSysFont** object referencing a multibyte system font.
ordering	**ASAtom** representing the CIDFont's Ordering information. Used to get a CMap object for **sysFont.**
hasdw	*(Filled by the method)* **true** if **sysFont** has a valid **dw** value; **false** otherwise.
dw	*(Filled by the method)* Default width for glyphs in a CIDFont. Currently, always **1000**. See Section 5.6 on CIDFontType 0 in the *PDF Reference* for more information.
w	*(Filled by the method)* A Cos array of a set of lists that define the widths for the glyphs in the CIDFont. Each list can specify individual widths for consecutive CIDs, or one width for a range of CIDs. See Section 5.6.3 on character widths in CIDFonts in the *PDF Reference* for information on the format of this array.
hasdw2	*(Filled by the method)* **true** if **sysFont** has a valid **dw2** value. Default is **false**.
dw2	*(Filled by the method)* The default metrics for writing mode 1. This entry is an array of two **ASInt32** numbers: the **y** component of the position vector and the **y** component of the displacement vector for writing mode 1. The **x** component of the position vector is always half the width of the character. The **x** component of the displacement vector is always **0**. The default value is [880 -1000]. For information on writing mode 1, see Section 5.6.3 on vertical writing in the *PDF Reference*.

w2	*(Filled by the method)* A Cos array defining the metrics for vertical writing. Its format is similar to the format of the array in *w*. It defines the **x** and **y** components of the position vector, and the y component of the displacement vector. The **x** component of the displacement vector is always 0. See Section 5.6.3 on character widths in CIDFonts in the *PDF Reference* for information on the format of this array.

Return Value

None

Exceptions

None

Notifications

None

Header File

PSFCalls.h

Related Methods

PDSysFontGetWidths
PDSysFontGetWidthsEx
PDFontGetWidths

Availability

Available if **PI_PDSYSFONT_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDSysFontGetWidths

```
void PDSysFontGetWidths (PDSysFont sysFont, ASInt16* widthsP);
```

Description

Gets the widths of a single byte encoded system font.

Parameters

sysFont	**A PDSysFont** object referencing a system font whose widths are obtained.
widthsP	*(Filled by the method)* Pointer to widths array. **widthsP** must have room for 256 entries.

Read/Write

Write

Return Value

None

Exceptions

peErrCantGetWidths

Notifications

None

Header File

PSFCalls.h

Related Methods

PDSysFontGetType0Widths
PDSysFontGetWidthsEx
PDFontGetWidths

Availability

Available if **PI_PDSYSFONT_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDSysFontGetWidthsEx

```
void PDSysFontGetWidthsEx (PDSysFont sysFont,
ASInt16* widthsP, ASFixed* mmDesignVector);
```

Description

Gets the widths of a single byte encoded system font.

Parameters

sysFont	**A PDSysFont** object referencing a system font whose widths are obtained.
widthsP	*(Filled by the method)* Pointer to widths array. **widthsP** must have room for 256 entries.
mmDesignVector	If **sysFont** is a multiple master font, points to the design vector, whose length must equal the number of design axes of **sysFont**.

Read/Write

Write

Return Value

None

Exceptions

peErrCantGetWidths

Notifications

None

Header File

PSFCalls.h

Related Methods

PDSysFontGetType0Widths
PDSysFontGetWidths
PDFontGetWidths

Availability

Available if **PI_PDSYSFONT_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDSysFontReleasePlatformData

```
void PDSysFontReleasePlatformData
(PDSysFontPlatDataP platDataP);
```

Description

Releases platform-specific data for the specified **PDSysFont**.

Parameters

platDataP	A pointer to a **PDSysFontPlatDataP** structure containing platform-specific data.

Return Value

None

Exceptions

None

Notifications

None

Header File

PSFCalls.h

Related Methods

PDSysFontAcquirePlatformData

Availability

Available if **PI_PDSYSFONT_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDSEdit Methods

PDSEdit Layers

PDSAttrObj
PDSClassMap
PDSElement
PDSMC
PDSOBJR
PDSRoleMap
PDSTreeRoot

PDSAttrObj

PDSAttrObjCreate

```
void PDSAttrObjCreate (PDDoc pdDoc, ASAtom owner,
ASBool indirect, PDSAttrObj* attrObj);
```

Description

Creates a new attribute object with the specified owner.

Parameters

pdDoc	Document in which the attribute object is created.
owner	Owner of the new attribute object.
indirect	If **true**, creates the attribute object as an indirect Cos object and sets **pdDoc**'s **PDDocNeedsSave** flag (see **PDDocFlags**). If **false**, creates the attribute object as a direct object.
attrObj	*(Filled by the method)* The newly-created attribute object.

Return Value

None

Exceptions

Various

Notifications

None

Header File

PDSWriteCalls.h

Related Methods

PDSAttrObjCreateFromStream

Availability

Available if **PI_PDS_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDSAttrObjCreateFromStream

```
void PDSAttrObjCreateFromStream (ASAtom owner,
CosObj cosStreamObj, PDSAttrObj* attrObj);
```

Description

Creates an attribute object with the specified owner from the specified Cos stream.

Parameters

owner	Owner of the new attribute object.
cosStreamObj	The Cos stream containing the data with which to create the attribute. The dictionary of this stream is modified.
attrObj	*(Filled by the method)* Pointer to the newly-created attribute object. This actually points to **cosStreamObj**. May be **NULL.**

Return Value

None

Exceptions

Among others, raises **pdsErrWrongTypeParameter** if **cosStreamObj** is not a Cos stream.

Notifications

None

Header File

PDSWriteCalls.h

Related Methods

PDSAttrObjCreate

Availability

Available if **PI_PDS_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDSAttrObjGetOwner

```
ASAtom PDSAttrObjGetOwner (PDSAttrObj attrObj);
```

Description

Gets the value of the key (**Owner**) in the specified attribute object.

Parameters

attrObj	The attribute object whose owner is obtained.

Return Value

The **ASAtom** for the owner's name.

Exceptions

Various

Notifications

None

Header File

PDSReadCalls.h

Related Methods

PDSAttrObjCreate

Availability

Available if **PI_PDS_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDSClassMap

PDSClassMapAddAttrObj

```
void PDSClassMapAddAttrObj (PDSClassMap classMap,
ASAtom classAtom, PDSAttrObj attrObj);
```

Description

Adds the specified attribute object to the specified **PDSClassMap** for the given class name. If the attribute object is already present, it is not added a second time.

Parameters

classMap	The **PDSClassMap** to which the specified attribute object is added.
classAtom	The **ASAtom** representing the class name.
attrObj	Attribute object to add to the class in **classAtom**.

Return Value

None

Exceptions

Raises **pdsErrBadPDF** if an error is found in the PDF file.

Notifications

None

Header File

PDSWriteCalls.h

Related Methods

PDSClassMapGetAttrObj
PDSClassMapRemoveAttrObj

Availability

Available if **PI_PDS_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDSClassMapGetAttrObj

```
void PDSClassMapGetAttrObj (PDSClassMap classMap,
ASAtom classAtom, ASInt32 index, PDSAttrObj* attrObj);
```

Description

Gets the attribute object associated with the specified class name at an index in the class.

If there is only one object and **index** is zero, that object is retrieved.

Parameters

classMap	The **PDSClassMap**.
classAtom	The **ASAtom** of a class name for which an associated attribute objects is found.
index	Index of the desired attribute object in the class.
attrObj	*(Filled by the method)* Attribute object at **index**. Set to **CosNull** if there is no attribute object at the specified location.

Return Value

None

Exceptions

Various

Notifications

None

Header File

PDSReadCalls.h

Related Methods

PDSClassMapAddAttrObj
PDSClassMapGetNumAttrObjs

Availability

Available if **PI_PDS_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDSClassMapGetNumAttrObjs

```
ASInt32 PDSClassMapGetNumAttrObjs (PDSClassMap classMap,
ASAtom classAtom);
```

Description

Gets the number of attribute objects associated with a class name.

Parameters

classMap	The **PDSClassMap**.
classAtom	The **ASAtom** of a class name for which the number of associated attribute objects is found.

Return Value

Number of attribute objects associated with the class in **classAtom.**

Exceptions

Various

Notifications

None

Header File

PDSReadCalls.h

Related Methods

PDSClassMapGetAttrObj

Availability

Available if **PI_PDS_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDSClassMapRemoveAttrObj

```
void PDSClassMapRemoveAttrObj (PDSClassMap classMap,
ASAtom classAtom, PDSAttrObj attrObj);
```

Description

Removes the specified attribute object from the specified **PDSClassMap**. If **classAtom** is **ASAtomNull**, removes all occurrences of **attrObj** in the entire **classMap**.

Parameters

classMap	The **PDSClassMap** from which the specified attribute object is removed.
classAtom	The **ASAtom** of a class name for which the associated attribute object is found.
attrObj	Attribute object to remove from **classMap**.

Return Value

None

Exceptions

Raises **pdsErrBadPDF** if an error is found in the PDF file.

Notifications

None

Header File

PDSWriteCalls.h

Related Methods

PDSClassMapAddAttrObj
PDSClassMapRemoveClass

Availability

Available if **PI_PDS_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDSClassMapRemoveClass

```
void PDSClassMapRemoveClass (PDSClassMap classMap,
ASAtom classAtom);
```

Description

Removes the specified class from the specified **PDSClassMap**, if it exists.

Parameters

classMap	The **PDSClassMap** from which a class is removed.
classAtom	The **ASAtom** representing the class to remove from **classMap**.

Return Value

None

Exceptions

Various

Notifications

None

Header File

PDSWriteCalls.h

Related Methods

PDSClassMapRemoveAttrObj

Availability

Available if **PI_PDS_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDSElement

PDSElementAddAttrObj

```
void PDSElementAddAttrObj (PDSElement element,
PDSAttrObj attrObj);
```

Description

Associates the specified attribute object with an element at the element's current revision value.

Parameters

element	Element with which **attrObj** is associated.
attrObj	Attribute object to associate with **element**.

Return Value

None

Exceptions

Various

Notifications

None

Header File

PDSWriteCalls.h

Related Methods

PDSElementGetAttrObj
PDSElementRemoveAttrObj

Availability

Available if **PI_PDS_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDSElementAddClass

```
void PDSElementAddClass (PDSElement element,
ASAtom classAtom);
```

Description

Adds a class name to the element's list of classes to which it belongs at the element's current revision value.

Parameters

element	Element to which a class is added.
classAtom	The **ASAtom** representing the class to add to **element.** If **classAtom** is already present among **element's** classes, it will not be added again.

Return Value

None

Exceptions

Various

Notifications

None

Header File

PDSWriteCalls.h

Related Methods

PDSElementGetClass
PDSElementGetNumClasses
PDSElementRemoveAllClasses
PDSElementRemoveClass

Availability

Available if **PI_PDS_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDSElementClearID

```
void PDSElementClearID (PDSElement element);
```

Description

Removes an element's ID, if it exists.

Parameters

element	Element whose ID is removed.

Return Value

None

Exceptions

Raises **pdsErrWrongTypeParameter** if **element** is not a valid **PDSElement**.

Raises **pdsErrBadPDF** if an error is found in the PDF file.

Notifications

None

Header File

PDSWriteCalls.h

Related Methods

PDSElementGetID
PDSElementSetID

Availability

Available if **PI_PDS_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDSElementCreate

```
void PDSElementCreate (PDDoc pdDoc, PDSElement* element);
```

Description

Creates a new (but empty) **PDSElement**.

Parameters

pdDoc	The **PDDoc** in which the **PDSElement** is created.
element	*(Filled by the method)* The newly-created **PDSElement**.

Return Value

None

Exceptions

Various

Notifications

None

Header File

PDSWriteCalls.h

Related Methods

None

Availability

Available if **PI_PDS_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDSElementGetActualText

```
ASInt32 PDSElementGetActualText (PDSElement element,
ASUns8 *buffer);
```

Description

Gets the actual text associated with the specified **PDSElement**. Returns the number of bytes in the text or **0** if the element has no actual text or has an empty string.

To check for the existence of alternate text, check for a non-zero return value. To get the needed size of buffer, call this method with a **NULL** buffer.

NOTE: Due to implementation issues, make the buffer one byte larger than the required size. Code will not null-terminate the string correctly in the case of Unicode strings.

Parameters

element	The structural element whose actual text is sought.
buffer	If not **NULL**, **buffer** will contain the element's actual text. String will be null-terminated but not correctly so in multi-byte. This is not a C-style string, so normal string handling functions may not work; the buffer may contain a Unicode string.

Return Value

An **ASInt32** representing the number of bytes in the text or **0** if the element has no actual text.

Exceptions

None

Notifications

None

Header File

PDSReadCalls.h

Related Methods

PDSElementSetActualText

Availability

Available if **PI_PDS_READ_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDSElementGetAlt

```
ASInt32 PDSElementGetAlt (PDSElement element, ASUns8* buffer);
```

Description

Gets the alternate text associated with an element.

Can first be called with a **NULL** buffer to find the size, so that **buffer** can then be appropriately sized.

NOTE: The Alt text can be legally defined as an empty string. To differentiate between an Alt text string of zero length and no Alt text being defined, call **PDSElementHasAlt** first.

NOTE: Due to implementation issues, make the buffer one byte larger than the required size.

Parameters

element	The element whose alternate text is obtained.
buffer	*(Filled by the method)* A buffer into which the alternate text is placed. May be **NULL**, if being called only to find the length of the element's alternate text. NOTE:

Return Value

Number of bytes in **element**'s alternate text.

Exceptions

Raises **pdsErrWrongTypeParameter** if **element** is not a valid **PDSElement**.

Notifications

None

Header File

PDSReadCalls.h

Related Methods

PDSElementSetAlt
PDSElementHasAlt

Availability

Available if **PI_PDS_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDSElementGetAttrObj

```
ASInt32 PDSElementGetAttrObj (PDSElement element,
ASInt32 index, PDSAttrObj* attrObj);
```

Description

Gets the attribute object at a specified array index in the specified element.

If there is only one attribute object (that is, there is no array of attributes), and **index** is zero, that attribute object is obtained.

Parameters

element	The element whose attribute is obtained.
index	Index of the attribute object to obtain.
attrObj	*(Filled by the method)* Attribute object at **index**.

Return Value

Revision number of **element** at time of last association.

Exceptions

pdsErrRequiredMissing

Raises **pdsErrWrongTypeParameter** if **element** is not a valid **PDSElement**.

Notifications

None

Header File

PDSReadCalls.h

Related Methods

PDSElementAddAttrObj
PDSElementGetNumAttrObjs
PDSElementRemoveAttrObj

Availability

Available if **PI_PDS_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDSElementGetClass

```
ASInt32 PDSElementGetClass (PDSElement element, ASInt32 index,
ASAtom* classAtom);
```

Description

Gets the class name at an array index in the specified element.

If there is only one attribute object (that is, there is no array), and **index** is zero, that class name is obtained.

Parameters

element	The element whose class is obtained.
index	Index of the class to obtain.
classAtom	*(Filled by the method)* The **ASAtom** describing the class.

Return Value

Revision number of **element** at time of last association.

Exceptions

pdsErrRequiredMissing

Raises **pdsErrWrongTypeParameter** if **element** is not a valid **PDSElement**.

Notifications

None

Header File

PDSReadCalls.h

Related Methods

PDSElementAddClass
PDSElementGetNumClasses
PDSElementRemoveAllClasses
PDSElementRemoveClass

Availability

Available if **PI_PDS_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDSElementGetFirstPage

```
CosObj PDSElementGetFirstPage (PDSElement element,
ASAtom* firstKidType, CosObj* firstCosObjKidOnAPage,
PDEContainer* firstMCKidOnAPage);
```

Description

Gets the Cos object for the page of the first kid of the element.

NOTE: The order in which the returned page is first is the order of kids, not the order of pages. That is, the first descendant with page content determines which page is returned.

Parameters

element	Element whose kid's first page is found.
firstKidType	*(Filled by the method)* Pointer to an **ASAtom** for the name that appears as the **Type** entry of the actual first kid of **element**. Possible values are the values that **PDSElementGetKid** can return. Pass **NULL** to inhibit setting **firstKidType**.
firstCosObjKidOnAPage	*(Filled by the method)* The kid whose content determined that the page returned was the first page with content—if that kid is a **CosObj**. Pass **NULL** to inhibit setting **firstCosObjKidOnAPage**.
firstMCKidOnAPage	*(Filled by the method)* The kid whose content determined that the page returned was the first page with content—if that kid is marked content that is *not* a **CosObj**. Pass **NULL** to inhibit setting **firstMCKidOnAPage.**

Return Value

The **CosObj** of the page found, **CosObjNull** if the element has no page content.

Exceptions

Various

Notifications

None

Header File

PDSReadCalls.h

Related Methods

PDSElementGetKid

Example

```
cosPage = PDSElementGetFirstPage(pdsElement, NULL, NULL, NULL);
```

Availability

Available if **PI_PDS_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDSElementGetID

```
ASInt32 PDSElementGetID (PDSElement element, ASUns8* idBuf);
```

Description

Gets the ID of an element or **CosObjNull** if there is no ID set.

Parameters

element	Element whose ID is obtained.
idBuf	*(Filled by the method)* Pointer to the buffer containing the element's ID.

Return Value

The number of bytes in the ID, or zero if the element has no ID.

Exceptions

Raises **pdsErrWrongTypeParameter** if **element** is not a valid **PDSElement**.

Raises **pdsErrBadPDF** if an error is found in the PDF file.

Notifications

None

Header File

PDSReadCalls.h

Related Methods

PDSElementClearID
PDSElementSetID
PDSTreeRootGetElementFromID

Availability

Available if **PI_PDS_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDSElementGetKid

```
ASAtom PDSElementGetKid (PDSElement element, ASInt32 index,
CosObj* cosObjKid, void** pointerKid, CosObj* cosPage);
```

Description

Gets the kid at an array index in the specified element.

A PDF structural element—unlike the structure tree root—can have *several different kinds* of children: marked content, another element, or an entire PDF object. The parameter in which the kid is placed depends on the type of kid. If the kid is a structural element or an object reference, **PDSElementGetKid** places the result in **cosObjKid**; if the kid is page content, it is placed in **pointerKid**.

Any or all of **cosObjKid**, **pointerKid**, and **cosPage** can be **NULL** to get the kid's type without setting that parameter.

NOTE: When the kid is an **MC**, it is actually a pointer of the type **PDEContainer**. As with all PDFEdit objects, you must be careful to manage the reference count of the object by calling **PDEAcquire** and **PDERelease**. **PDSElementGetKid** does not call **PDEAcquire** for you.

Parameters

element	Element whose specified kid is found.
index	Index of the kid to obtain.
cosObjKid	*(Filled by the method)* The **CosObj** of the specified kid—if that kid is a **PDSElement** or an **OBJR**. If **cosObjKid** is **NULL**, it is not filled in, but the type of the kid is returned regardless. NOTE: This CosObj can be treated as a PDSElement or a PDSObjR. Use the return type to decide which to use.
pointerKid	*(Filled by the method)* Pointer to the kid at **index**—if that kid is an **MC**. If **pointerKid** is **NULL**, it is not filled in, but the type of the kid is returned regardless.
cosPage	*(Filled by the method)* Pointer to the **CosObj** of the page containing the kid. If **cosPage** is **NULL**, it is not filled in, but the type of the kid is returned regardless.

Return Value

The **ASAtom** representing the kid's **Type** value: **StructElem**, **MC** or **OBJR**. **MCR** is never returned.

Exceptions

Raises **pdsErrWrongTypeParameter** if **element** is not a valid **PDSElement**.

Raises **pdsErrBadPDF** if an error is found in the PDF file.

Notifications

None

Header File

PDSReadCalls.h

Related Methods

PDSElementGetFirstPage
PDSElementGetKidEx
PDSElementGetNumKids
PDSElementInsertKid

Availability

Available if **PI_PDS_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDSElementGetKidEx

```
ASAtom PDSElementGetKidEx (PDSElement element, ASInt32 index,
CosObj* cosObjKid, ASInt32* mcid, void** pointerKid,
CosObj* cosPage);
```

Description

Functions identically to **PDSElementGetKid**, but for children that are marked contents returns the **mcid** or/and the actual object.

Parameters

element	The **PDSElement** containing the kid that is being retrieved.
index	The index of the kid.
cosObjKid	*(Filled in by method)* The kid being accessed (depending on the kid's type) or **NULL**.
mcid	*(Filled in by method)* The kid's **mcid** or **NULL**. See above.
pointerKid	*(Filled in by method)* Pointer to the kid or **NULL**.
cosPage	*(Filled in by method)* The **CosObj** of the page containing the kid or **NULL.**

Return Value

An **ASAtom** representing the **Type** value of the kid. See above.

Exceptions

Raises **pdsErrWrongTypeParameter** if **element** is not a valid **PDSElement**.
Raises **pdsErrBadPDF** if an error is found in the PDF file.

Notifications

None

Header File

PDSReadCalls.h

Related Methods

PDSElementGetKid

Availability

Available if **PI_PDS_READ_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDSElementGetLanguage

```
ASInt32 PDSElementGetLanguage (PDSElement element,
ASUns8 *buffer);
```

Description

Gets the language associated with the specified **PDSElement**.

Returns the number of bytes in the language string or **0** if the element has no language or has an empty string.

To check for the existence of expansion text, call **PDSElementHasLanguage**. To get the needed buffer size, call this method with a **NULL** buffer.

NOTE: Due to implementation issues, make the buffer one byte larger than the required size.

Parameters

element	The structural element whose expansion text is sought.
buffer	A buffer containing the element's expansion text or **NULL**. See **PDSElementSetLanguage** for format and languages.

Return Value

An **ASInt32** representing the number of bytes in the language string.

Exceptions

None

Notifications

None

Header File

PDSReadCalls.h

Related Methods

PDSElementSetLanguage
PDSElementHasLanguage

Availability

Available if **PI_PDS_READ_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDSElementGetNumAttrObjs

```
ASInt32 PDSElementGetNumAttrObjs (PDSElement element);
```

Description

Gets the number of attribute objects directly attached to the specified element.

Parameters

element	The element whose number of attributes is obtained.

Return Value

Number of attribute objects directly attached to **element.**

Exceptions

Raises **pdsErrWrongTypeParameter** if **element** is not a valid **PDSElement**.

Notifications

None

Header File

PDSReadCalls.h

Related Methods

PDSElementGetAttrObj

Availability

Available if **PI_PDS_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDSElementGetNumClasses

```
ASInt32 PDSElementGetNumClasses (PDSElement element);
```

Description

Gets the number of classes to which the specified element belongs.

Parameters

element	The element whose number of classes is obtained.

Return Value

Number of classes to which **element** belongs.

Exceptions

Raises **pdsErrWrongTypeParameter** if **element** is not a valid **PDSElement**.

Notifications

None

Header File

PDSReadCalls.h

Related Methods

PDSElementGetClass

Availability

Available if **PI_PDS_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDSElementGetNumKids

```
ASInt32 PDSElementGetNumKids (PDSElement element);
```

Description

Gets the number of kids of the specified element.

Parameters

element	Element whose number of kids is obtained.

Return Value

Number of direct kids of **element.**

Exceptions

Raises **pdsErrWrongTypeParameter** if **element** is not a valid **PDSElement**.

Notifications

None

Header File

PDSReadCalls.h

Related Methods

PDSElementGetKid

Availability

Available if **PI_PDS_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDSElementGetParent

```
void PDSElementGetParent (PDSElement element,
PDSElement* parent, ASBool* parentIsTreeRoot);
```

Description

Gets the immediate ancestor element of the specified element in the tree.

If the element's **parent** is another element, **parent** is set to that parent and **parentIsTreeRoot** is set to **false**. If the element's **parent** is the structure tree root, **parent** is set to **CosNull** and **parentIsTreeRoot** is set to **true**. If **parentIsTreeRoot** is **NULL**, it is not set.

Parameters

element	The element whose parent is obtained.
parent	*(Filled by the method)* The **element**'s parent.
parentIsTreeRoot	*(Filled by the method)* The **element**'s parent is the structure tree root.

Return Value

None

Exceptions

Raises **pdsErrWrongTypeParameter** if **element** is not a valid **PDSElement**.

Notifications

None

Header File

PDSReadCalls.h

Related Methods

PDSElementGetKid
PDSElementGetStructTreeRoot
PDSMCGetParent
PDSOBJGetParent

Availability

Available if **PI_PDS_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDSElementGetRevision

```
ASInt32 PDSElementGetRevision (PDSElement element);
```

Description

Gets the revision number of an element.

Parameters

element	The element whose revision is obtained.

Return Value

Revision number of **element.**

Exceptions

Raises **pdsErrWrongTypeParameter** if **element** is not a valid **PDSElement**.

Notifications

None

Header File

PDSReadCalls.h

Related Methods

PDSElementIncrementRevision

Availability

Available if **PI_PDS_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDSElementGetStructTreeRoot

```
ASBool PDSElementGetStructTreeRoot (PDSElement element,
PDSTreeRoot* treeRoot);
```

Description

Gets the structure tree root of the document containing **element**.

Parameters

element	Element whose title is obtained.
treeRoot	*(Filled by the method)* The structure tree root.

Return Value

true if the document has a structure tree root, **false** otherwise. If there is a structure tree root, sets **treeRoot** to be the structure tree root.

Exceptions

Raises **pdsErrWrongTypeParameter** if **element** is not a valid **PDSElement**.

Notifications

None

Header File

PDSReadCalls.h

Related Methods

PDSTreeRootGetKid

Availability

Available if **PI_PDS_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDSElementGetTitle

```
ASInt32 PDSElementGetTitle (PDSElement element,
ASUns8* buffer);
```

Description

Gets the title of the specified element, returning the number of bytes in the title.

Can first be called with a **NULL** buffer to find the title size, so that **buffer** can be appropriately sized as one greater than the title's length.

NOTE: Due to implementation issues, make the buffer one byte larger than the required size.

Parameters

element	Element whose title is obtained.
buffer	*(Filled by the method)* A buffer into which the title text is placed. May be **NULL**, in which case the number of bytes in the title is returned.

Return Value

Number of bytes in **element**'s title, or zero if **element** has no title.

Exceptions

Raises **pdsErrWrongTypeParameter** if **element** is not a valid **PDSElement**.

Notifications

None

Header File

PDSReadCalls.h

Related Methods

PDSElementSetTitle

Availability

Available if **PI_PDS_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDSElementGetType

```
ASAtom PDSElementGetType (PDSElement element);
```

Description

Gets the element's structural element type. The type corresponds to the **Subtype** key in the structure element dictionary.

PDSElementGetType gets the value of the **Subtype** key—not the **Type** key—in the structure element dictionary. All **PDSElement**s have a **Type** value of **StructElem**.

Parameters

element	The element whose structural element type is obtained.

Return Value

The **ASAtom** representing **element**'s type.

Exceptions

Raises **pdsErrWrongTypeParameter** if **element** is not a valid **PDSElement**.

Notifications

None

Header File

PDSReadCalls.h

Related Methods

PDSElementSetType

Availability

Available if **PI_PDS_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDSElementHasActualText

```
ASBool PDSElementHasActualText (PDSElement element);
```

Description

Tests whether or not Actual text is defined for a given **PDSElement**.

Parameters

element	The **PDSElement** being tested.

Return Value

true if text exists (including the empty string); **false** otherwise.

Exceptions

None

Notifications

None

Header File

PDSReadCalls.h

Related Methods

None

Availability

Available if **PI_PDS_READ_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDSElementHasAlt

```
ASBool PDSElementHasAlt (PDSElement element);
```

Description

Tests whether or not Alt text is defined for a given **PDSElement**.

Parameters

element	The **PDSElement** being tested.

Return Value

true if text exists (including the empty string); **false** otherwise.

Exceptions

None

Notifications

None

Header File

PDSReadCalls.h

Related Methods

PDSElementGetAlt

Availability

Available if **PI_PDS_READ_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDSElementHasLanguage

```
ASBool PDSElementHasLanguage (PDSElement element);
```

Description

Tests whether or not a language string is defined for a given **PDSElement**.

Parameters

element	The **PDSElement** being tested.

Return Value

true if text exists (including the empty string); **false** otherwise.

Exceptions

None

Notifications

None

Header File

PDSReadCalls.h

Related Methods

None

Availability

Available if **PI_PDS_READ_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDSElementIncrementRevision

```
void PDSElementIncrementRevision (PDSElement element);
```

Description

Increments an element's revision count by one.

Parameters

element	Element whose revision count is incremented.

Return Value

None

Exceptions

Various

Notifications

None

Header File

PDSWriteCalls.h

Related Methods

None

Availability

Available if **PI_PDS_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDSElementInsertKid

```
void PDSElementInsertKid (PDSElement element, PDSElement kid,
ASInt32 insertAfter);
```

Description

Inserts the specified kid **PDSElement** object into the specified element after position **insertAfter**.

Parameters

element	Element in which the specified kid is inserted.
kid	The kid to insert.
insertAfter	Position after which the kid is inserted. If **element** currently has no kids, **insertAfter** is ignored.

Return Value

None

Exceptions

pdsErrWrongTypeParameter

Notifications

None

Header File

PDSWriteCalls.h

Related Methods

PDSElementGetFirstPage
PDSElementGetKid
PDSElementInsertMCAsKid
PDSElementInsertOBJAsKid
PDSElementRemoveKid
PDSElementReplaceKid

Availability

Available if **PI_PDS_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDSElementInsertMCAsKid

```
void PDSElementInsertMCAsKid (PDSElement element,
CosObj cosPage, PDSMC mc, ASInt32 insertAfter);
```

Description

Inserts a reference to the specified **PDSMC** (marked content) in the specified element after position **insertAfter**.

This method automatically creates **MCR** objects if needed.

Parameters

element	Element in which the reference is inserted.
cosPage	The **CosObj** for the page containing the reference to insert.
mc	The marked content to insert.
insertAfter	Position after which the reference is inserted. If **element** currently has no kids, **insertAfter** is ignored.

Return Value

None

Exceptions

Various

Notifications

None

Header File

PDSWriteCalls.h

Related Methods

PDSElementInsertKid
PDSElementInsertOBJAsKid
PDSElementReplaceKidMC

Availability

Available if **PI_PDS_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDSElementInsertOBJAsKid

```
void PDSElementInsertOBJAsKid (PDSElement element,
CosObj cosPage, CosObj obj, ASInt32 insertAfter);
```

Description

Inserts a reference to the specified PDF object as a kid into the specified element.

Parameters

element	Element in which the reference is inserted.
cosPage	The **CosObj** for the page containing the reference to insert.
obj	The **CosObj** to insert.
insertAfter	Position after which the reference is inserted in **element**. If **element** currently has no kids, **insertAfter** is ignored.

Return Value

None

Exceptions

Various

Notifications

None

Header File

PDSWriteCalls.h

Related Methods

PDSElementReplaceKidOBJ

Availability

Available if **PI_PDS_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDSElementRemoveAllAttrObjs

```
void PDSElementRemoveAllAttrObjs (PDSElement element);
```

Description

Removes *all* attribute objects directly associated with the specified element.

Parameters

element	Element whose attributes are removed.

Return Value

None

Exceptions

Raises **pdsErrWrongTypeParameter** if **element** is not a valid **PDSElement**.

Notifications

None

Header File

PDSWriteCalls.h

Related Methods

PDSElementRemoveAttrObj

Availability

Available if **PI_PDS_WRITE_VERSION** (in PIRequir.h) is set to 0x00040000 or higher.

PDSElementRemoveAllClasses

```
void PDSElementRemoveAllClasses (PDSElement element);
```

Description

Removes *all* classes from the specified element.

Parameters

element	Element whose classes are removed.

Return Value

None

Exceptions

Raises **pdsErrWrongTypeParameter** if **element** is not a valid **PDSElement**.

Notifications

None

Header File

PDSWriteCalls.h

Related Methods

PDSElementAddClass
PDSElementGetClass
PDSElementGetNumClasses
PDSElementRemoveClass

Availability

Available if **PI_PDS_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDSElementRemoveAttrObj

```
void PDSElementRemoveAttrObj (PDSElement element,
PDSAttrObj attrObj);
```

Description

Removes the specified attribute object from an element. If **element** does not have an **attrObj** attribute, this method does nothing.

NOTE: Calling **PDSElementRemoveAttrObj** while iterating over the attribute objects of an element will change the relationship between attribute object indices and attribute objects. Although it is possible to track this change in indices in a single loop, it is more straightforward to accumulate a list of attribute objects to remove during one pass over the attribute objects and to carry out the actual removals during a subsequent iteration over the accumulated list.

Parameters

element	Element whose attribute is removed.
attrObj	Attribute object to remove.

Return Value

None

Exceptions

Raises **pdsErrWrongTypeParameter** if **element** is not a valid **PDSElement** or **attrObj** is not a valid attribute object.

Notifications

None

Header File

PDSWriteCalls.h

Related Methods

PDSElementAddAttrObj
PDSElementGetAttrObj
PDSElementRemoveAllAttrObjs

Availability

Available if **PI_PDS_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDSElementRemoveClass

```
void PDSElementRemoveClass (PDSElement element,
ASAtom classAtom);
```

Description

Removes the specified class name from the element's list of classes to which it belongs.

NOTE: Calling PDSElementRemoveClass while iterating over the classes of an element will change the relationship between class indices and classes. Although it is possible to track this change in indices in a single loop, it is more straightforward to accumulate a list of classes to remove during one pass over the classes and to carry out the actual removals during a subsequent iteration over the accumulated list.

Parameters

element	Element from which the specified class is removed.
classAtom	The **ASAtom** representing the class to remove.

Return Value

None

Exceptions

Raises **pdsErrWrongTypeParameter** if **element** is not a valid **PDSElement**.

Notifications

None

Header File

PDSWriteCalls.h

Related Methods

PDSElementAddClass
PDSElementGetClass
PDSElementGetNumClasses
PDSElementRemoveAllClasses

Availability

Available if **PI_PDS_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDSElementRemoveKid

```
void PDSElementRemoveKid (PDSElement element, CosObj kid);
```

Description

Removes the specified kid from an element.

NOTE: Approved method of removing OBJ kids is **PDSElementRemoveKidOBJ**.

Parameters

element	Element whose kid is removed.
kid	Kid to remove.

Return Value

None

Exceptions

Various

Notifications

None

Header File

PDSWriteCalls.h

Related Methods

PDSElementGetKid
PDSElementInsertKid
PDSElementRemoveKidMC
PDSElementRemoveKidOBJ

Availability

Available if **PI_PDS_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDSElementRemoveKidMC

```
void PDSElementRemoveKidMC (PDSElement element,
CosObj cosPage, PDSMC mc);
```

Description

Removes the specified **PDSMC** (marked content) from an element's kids, if it has any.

Parameters

element	Element whose reference is removed.
cosPage	The **CosObj** for the page containing the reference to remove.
mc	The marked content to remove.

Return Value

None

Exceptions

Various

Notifications

None

Header File

PDSWriteCalls.h

Related Methods

PDSElementInsertMCAsKid
PDSElementReplaceKidMC
PDSElementRemoveKid

Availability

Available if **PI_PDS_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDSElementRemoveKidOBJ

```
void PDSElementRemoveKidOBJ (PDSElement element, CosObj kid);
```

Description

Removes an OBJ from among the kids of a given element. Does nothing if the given OBJ isn't a kid of the given element.

Parameters

element	Element whose kid is having an OBJ removed.
kid	**kid** whose OBJ is being removed.

Return Value

None

Exceptions

Various

Notifications

None

Header File

PDSWriteCalls.h

Related Methods

PDSElementInsertMCAsKid
PDSElementReplaceKidMC
PDSElementRemoveKid

Availability

Available if **PI_PDS_WRITE_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDSElementReplaceKid

```
void PDSElementReplaceKid (PDSElement element, CosObj oldKid,
CosObj newKid);
```

Description

Replaces the specified kid in the specified element.

NOTE: Approved method of replacing OBJ kids is **PDSElementReplaceKidOBJ**.

Parameters

element	Element whose kid is replaced.
oldKid	Kid to replace.
newKid	Kid that is replacing **oldKid**.

Return Value

None

Exceptions

Various

Notifications

None

Header File

PDSWriteCalls.h

Related Methods

PDSElementInsertKid
PDSElementGetFirstPage
PDSElementGetKid
PDSElementRemoveKid
PDSElementReplaceKidMC
PDSElementReplaceKidOBJ

Availability

Available if **PI_PDS_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDSElementReplaceKidMC

```
void PDSElementReplaceKidMC (PDSElement element,
CosObj oldCosPage, PDSMC oldMC, CosObj newCosPage,
PDSMC newMC);
```

Description

Replaces the specified **PDSMC** (on **oldCosPage**) with a new **PDSMC** (on **newCosPage**) in the specified element.

Parameters

element	Element whose reference is replaced.
oldCosPage	The **CosObj** for the page holding the reference to replace.
oldMC	The marked content to replace.
newCosPage	The **CosObj** for the page holding the reference that is replacing **oldMC**.
newMC	The marked content that is replacing **oldMC**.

Return Value

None

Exceptions

Various

Notifications

None

Header File

PDSWriteCalls.h

Related Methods

PDSElementInsertMCAsKid
PDSElementRemoveKidMC
PDSElementReplaceKid

Availability

Available if **PI_PDS_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDSElementReplaceKidOBJ

```
void PDSElementReplaceKidOBJ (PDSElement element,
CosObj oldObj, CosObj newObj, CosObj newPage);
```

Description

Replaces **oldObj** with **newObj** on the specified page in the specified **element**.

Parameters

element	Element whose object is replaced.
oldObj	Object to replace.
newObj	Object that is replacing **oldObj**.
newPage	The **CosObj** for the page holding the reference that is replacing **oldObj**.

Return Value

None

Exceptions

Various

Notifications

None

Header File

PDSWriteCalls.h

Related Methods

PDSElementInsertOBJAsKid
PDSElementReplaceKid
PDSElementReplaceKidMC

Availability

Available if **PI_PDS_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDSElementSetActualText

```
void PDSElementSetActualText (PDSElement element,
const ASUns8 *buffer, ASInt32 nBytes);
```

Description

Sets the actual text representation of the specified **PDSElement**'s contents to buffer (from **0** to **nBytes**)

Parameters

element	The **PDSElement** whose contents are being set to **buffer**.
buffer	The buffer to which the **PDSElement**'s contents are being set.
nBytes	The number of bytes in the text representation.

Return Value

None

Exceptions

None

Notifications

None

Header File

PDSWriteCalls.h

Related Methods

PDSElementGetActualText

Availability

Available if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDSElementSetAlt

```
void PDSElementSetAlt (PDSElement element,
const ASUns8* buffer, ASInt32 nBytes);
```

Description

Sets the alternate text representation of an element's contents.

Parameters

element	Element whose alternate text representation is set.
buffer	Pointer to a buffer containing a string to be made the element's alternate text representation.
nBytes	Number of bytes in **buffer** to use as **element's** new alternate text representation. May be zero. Sets an Alt string even if the **buffer** length is zero, but such an Alt string looks like no Alt string according to **PDSElementGetAlt**.

Return Value

None

Exceptions

Raises **pdsErrWrongTypeParameter** if **element** is not a valid **PDSElement**.

Notifications

None

Header File

PDSWriteCalls.h

Related Methods

PDSElementGetAlt
PDSElementHasAlt

Availability

Available if **PI_PDS_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDSElementSetID

```
void PDSElementSetID (PDSElement element,
const ASUns8* buffer, ASInt32 nBytes);
```

Description

Sets the ID of an element to the given Cos string.

Parameters

element	Element whose ID is set.
buffer	Pointer to a buffer containing a string to be made the element's ID.
nBytes	Number of bytes in **buffer** to use as **element**'s new ID. May be zero. Sets an ID even if the **buffer** length is zero, but such an ID looks like no ID according to **PDSElementGetID**.

Return Value

None

Exceptions

Raises **pdsErrAlreadyExists** if another element already has **id** as its ID.

Raises **pdsErrWrongTypeParameter** if **element** is not a valid **PDSElement**.

Notifications

None

Header File

PDSWriteCalls.h

Related Methods

PDSElementGetID
PDSElementClearID

Availability

Available if **PI_PDS_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDSElementSetLanguage

```
void PDSElementSetLanguage (PDSElement element,
const ASUns8 *buffer, ASInt32 nBytes);
```

Description

Sets the language field associated with the **PDSElement** to **buffer**'s contents (from **0** to **nBytes**).

Parameters

element	The **PDSElement** whose language field is being set to **buffer**.
buffer	Pointer to a buffer containing a string to be made the element's language field. The empty string indicates that the language is unknown. String should be in format <IETF RFC-1766-language-code>. NOTE: ISO 639 language codes can be found at: http://lcweb.loc.gov/standards/iso639-2 NOTE: IANA registered language codes can be found at: http://www.isi.edu/in-notes/iana/assignments/languages NOTE: The IETF Standard for Language Element Values (RFC 1766) can be found at: http://www.ietf.org/rfc/rfc1766.txt?number=1766
nBytes	Size of buffer. May be zero. Sets the language even if the **buffer** length is zero, but such a language setting looks like no language according to **PDSElementGetLanguage**.

Return Value

None

Exceptions

None

Notifications

None

Header File

PDSWriteCalls.h

Related Methods

PDSElementGetLanguage
PDSElementHasLanguage

Availability

Available if **`PI_PDS_WRITE_VERSION`** (in `PIRequir.h`) is set to **`0x00050000`** or higher.

PDSElementSetTitle

```
void PDSElementSetTitle (PDSElement element,
const ASUns8* buffer, ASInt32 nBytes);
```

Description

Sets an element's title.

Parameters

element	Element whose title is set.
buffer	Pointer to a buffer containing a string to be made the element's title.
nBytes	Number of bytes in **buffer** to use as **element's** new title. May be zero. Sets a title even if the **buffer** length is zero, but such a title looks like no title according to **PDSElementGetTitle**.

Return Value

None

Exceptions

Raises **pdsErrWrongTypeParameter** if **element** is not a valid **PDSElement**.

Notifications

None

Header File

PDSWriteCalls.h

Related Methods

PDSElementGetTitle

Availability

Available if **PI_PDS_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDSElementSetType

```
void PDSElementSetType (PDSElement element, ASAtom type);
```

Description

Sets an element's type value to the specified type. The type corresponds to the **Subtype** key in the structure element dictionary.

PDSElementSetType sets the value of the **Subtype** key—not the **Type** key—in the structure element dictionary. All **PDSElement**s have a **Type** value of **StructElem**.

Parameters

element	Element whose type is set.
type	The **ASAtom** representing the element's type.

Return Value

None

Exceptions

Raises **pdsErrWrongTypeParameter** if **element** is not a valid **PDSElement**.

Notifications

None

Header File

PDSWriteCalls.h

Related Methods

PDSElementGetType

Availability

Available if **PI_PDS_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDSMC

PDSMCGetParent

```
void PDSMCGetParent (CosObj containingObj, PDSMC mc,
PDSElement* parent);
```

Description

Gets the parent element of the specified marked content.

Parameters

containingObj	The **CosObj** containing the **MC** whose parent is obtained. For marked content on a page, this is the Cos object representing the page. For marked content elsewhere, this is the stream in which the marked content resides.
mc	The marked content whose parent is obtained.
parent	*(Filled by the method)* Parent element of **containingObj**.

Return Value

None

Exceptions

Raises **pdsErrBadPDF** if an error is found in the PDF file. Will also raise the error if the **PDSMC** passed to it is not in the structure tree.

Notifications

None

Header File

PDSReadCalls.h

Related Methods

PDSElementGetParent
PDSElementInsertMCAsKid
PDSElementRemoveKidMC

Availability

Available if **PI_PDS_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDSOBJR

PDSOBJGetParent

```
void PDSOBJGetParent (CosObj obj, PDSElement* parent);
```

Description

Gets the parent element of the specified PDF object.

Parameters

obj	PDF object whose parent element is obtained. Must be referred to via an **OBJR** from some element (that is, it has a **struct** parent key), otherwise undefined.
parent	*(Filled by the method)* Parent element of **obj**.

Return Value

None

Exceptions

Various

Notifications

None

Header File

PDSReadCalls.h

Related Methods

PDSElementGetParent

Availability

Available if **PI_PDS_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDSRoleMap

PDSRoleMapCopy

```
void PDSRoleMapCopy (PDSRoleMap srcRoleMap,
PDSTreeRoot dstTreeRoot, PDSRoleMap* dstRoleMap);
```

Description

Makes a copy of a **PDSRoleMap**, making it the **PDSRoleMap** of the specified **StructTreeRoot**.

Parameters

srcRoleMap	The **PDSRoleMap** to copy.
dstTreeRoot	The structure tree root in which to place **srcRoleMap**.
dstRoleMap	*(Filled by the method)* If not **NULL**, points to the new, copied **PDSRoleMap**.

Return Value

None

Exceptions

Various

Notifications

None

Header File

PDSWriteCalls.h

Related Methods

PDSTreeRootGetRoleMap

Availability

Available if **PI_PDS_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDSRoleMapDoesMap

```
ASBool PDSRoleMapDoesMap (PDSRoleMap roleMap, ASAtom src,
ASAtom dst);
```

Description

Determines whether the specified **PDSRoleMap** provides any mapping path for two given element types.

Parameters

roleMap	The **PDSRoleMap**.
src	The **ASAtom** for an element type whose mapping is tested.
dst	The **ASAtom** for an element type. NOTE: This may be a standard element type.

Return Value

true if an mapping path was found, **false** otherwise.

Exceptions

Raises **pdsErrBadPDF** if an error is found in the PDF file.

Notifications

None

Header File

PDSReadCalls.h

Related Methods

PDSRoleMapMap

Availability

Available if **PI_PDS_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDSRoleMapGetDirectMap

```
ASAtom PDSRoleMapGetDirectMap (PDSRoleMap roleMap,
ASAtom type);
```

Description

Gets the type, if any, directly mapped in the specified **PDSRoleMap** for the given element type.

Parameters

roleMap	The **PDSRoleMap**.
type	The **ASAtom** for an element type whose mapping is found.

Return Value

The **ASAtom** for the equivalent type specified in **roleMap**, or **ASAtomNull** if **type** has no mapping in **roleMap**.

Exceptions

Raises **pdsErrBadPDF** if an error is found in the PDF file.

Notifications

None

Header File

PDSReadCalls.h

Related Methods

PDSRoleMapDoesMap

Availability

Available if **PI_PDS_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDSRoleMapMap

```
void PDSRoleMapMap (PDSRoleMap roleMap, ASAtom src,
ASAtom dst);
```

Description

Maps an element type **src** to another element type **dst** in the specified **PDSRoleMap**.

Parameters

roleMap	The **PDSRoleMap** in which to create a new mapping.
src	Element type to map to **dst**.
dst	Element type that **src** maps onto. NOTE: This may be a standard element type, such as **P**.

Return Value

None

Exceptions

Raises **pdsErrAlreadyExists** if **src** is already mapped.

Notifications

None

Header File

PDSWriteCalls.h

Related Methods

PDSRoleMapDoesMap

Availability

Available if **PI_PDS_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDSRoleMapUnMapDst

```
void PDSRoleMapUnMapDst (PDSRoleMap roleMap, ASAtom dst);
```

Description

Makes the specified element type have no mapping.

Parameters

roleMap	The **PDSRoleMap** in which to un-map all element types that map onto the **dst** element type.
dst	Element type to which all mappings are removed. All element types that map to the **dst** element type are unmapped.

Return Value

None

Exceptions

pdsErrWrongTypeParameter

Notifications

None

Header File

PDSWriteCalls.h

Related Methods

PDSRoleMapUnMapSrc

Availability

Available if **PI_PDS_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDSRoleMapUnMapSrc

```
void PDSRoleMapUnMapSrc (PDSRoleMap roleMap, ASAtom src,
ASBool fixupOthers);
```

Description

Makes the specified element type have no mapping.

Parameters

roleMap	The **PDSRoleMap** in which to un-map the **src** element type.
src	Element type whose mapping is removed.
fixupOthers	If **true**, any element type that was directly mapped to **src** is mapped to whatever **src** previously mapped to. If **false**, **PDSRoleMapUnMapSrc** only un-maps **src**.

Return Value

None

Exceptions

Various

Notifications

None

Header File

PDSWriteCalls.h

Related Methods

PDSRoleMapUnMapDst

Availability

Available if **PI_PDS_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDSTreeRoot

PDSTreeRootCreateClassMap

```
void PDSTreeRootCreateClassMap (PDSTreeRoot treeRoot,
PDSClassMap* classMap);
```

Description

Creates a **PDSClassMap** in the specified tree root.

Any previously existing **PDSClassMap** is unlinked.

Parameters

treeRoot	The structure tree root in which to create a **PDSClassMap**.
classMap	*(Filled by the method)* The newly-created **PDSClassMap**.

Return Value

None

Exceptions

Various

Notifications

None

Header File

PDSWriteCalls.h

Related Methods

PDSTreeRootGetClassMap
PDSTreeRootRemoveClassMap

Availability

Available if **PI_PDS_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDSTreeRootCreateRoleMap

```
void PDSTreeRootCreateRoleMap (PDSTreeRoot treeRoot,
PDSRoleMap* roleMap);
```

Description

Creates and sets the **PDSRoleMap** of the specified **StructTreeRoot** element. Any previously existing **PDSRoleMap** is unlinked.

Parameters

treeRoot	The structure tree root in which to create a **PDSRoleMap**.
roleMap	*(Filled by the method)* The newly-created **PDSRoleMap**.

Return Value

None

Exceptions

Various

Notifications

None

Header File

PDSWriteCalls.h

Related Methods

PDSTreeRootGetRoleMap
PDSTreeRootRemoveRoleMap

Availability

Available if **PI_PDS_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDSTreeRootGetClassMap

```
ASBool PDSTreeRootGetClassMap (PDSTreeRoot treeRoot,
PDSClassMap* classMap);
```

Description

Gets the **PDSClassMap** object for the specified structure tree root.

Parameters

treeRoot	The structure tree root whose **PDSClassMap** is obtained.
classMap	*(Filled by the method)* Pointer to a location in which to return the class map, if one exists. Set to **CosNull** if there is no class map. If a **NULL** pointer is passed, no retrieval will take place.

Return Value

true if there is a class map, **false** otherwise.

Exceptions

Various

Notifications

None

Header File

PDSReadCalls.h

Related Methods

PDSTreeRootCreateClassMap

Availability

Available if **PI_PDS_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDSTreeRootGetElementFromID

```
ASBool PDSTreeRootGetElementFromID (PDSTreeRoot treeRoot,
const char* id, ASInt32 numChars, PDSElement* element);
```

Description

Gets the element associated with the given ID, if any.

Parameters

treeRoot	The structure tree root in which to search for **id**.
id	Pointer to a buffer containing the ID to search for.
numChars	Number of characters in **id**.
element	*(Filled by the method)* The element corresponding to **id**. Undefined if no element has the specified **id**.

Return Value

true if an element for **id** found, or **false** with **element** undefined if the tree root contains no **IDTree** value.

Exceptions

Raises **pdsErrWrongTypeParameter** if **id** is **NULL** or **numChars** is zero or less.

Raises **pdsErrWrongTypeEntry** if the **IDTree** value in **treeRoot** is not a dictionary.

Notifications

None

Header File

PDSReadCalls.h

Related Methods

PDSElementGetID

Availability

Available if **PI_PDS_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDSTreeRootGetKid

```
void PDSTreeRootGetKid (PDSTreeRoot treeRoot, ASInt32 index,
PDSElement* kid);
```

Description

Gets the kid at an array index in the specified structure tree root.

Parameters

treeRoot	The structure tree root whose kid is obtained.
index	Index of the kid to obtain.
kid	*(Filled by the method)* Pointer to the kid at **index**.

Return Value

None

Exceptions

Raises **pdsErrBadPDF** if an error is found in the PDF file.

Notifications

None

Header File

PDSReadCalls.h

Related Methods

PDSTreeRootGetNumKids

Availability

Available if **PI_PDS_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDSTreeRootGetNumKids

```
ASInt32 PDSTreeRootGetNumKids (PDSTreeRoot treeRoot);
```

Description

Gets the number of kids of the structure tree root.

Parameters

treeRoot	The structure tree root whose number of kids is obtained.

Return Value

The number of kids of the structure tree root.

Exceptions

Various

Notifications

None

Header File

PDSReadCalls.h

Related Methods

PDSTreeRootGetKid

Availability

Available if **PI_PDS_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDSTreeRootGetRoleMap

```
ASBool PDSTreeRootGetRoleMap (PDSTreeRoot treeRoot,
PDSRoleMap* roleMap);
```

Description

Gets the **PDSRoleMap** object for the specified structure tree root.

Parameters

treeRoot	The structure tree root whose **PDSRoleMap** is obtained.
roleMap	*(Filled by the method)* Pointer to a location in which to return the role map, if one exists. Set to **CosNull** if there is no role map. If a **NULL** pointer is passed, no retrieval will take place.

Return Value

true if there is a role map, **false** otherwise.

Exceptions

Various

Notifications

None

Header File

PDSReadCalls.h

Related Methods

PDSTreeRootCreateRoleMap

Availability

Available if **PI_PDS_READ_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDSTreeRootInsertKid

```
void PDSTreeRootInsertKid (PDSTreeRoot treeRoot,
PDSElement kid, ASInt32 insertAfter);
```

Description

Inserts the specified kid element after the given position as a kid of the specified structure tree root.

Parameters

treeRoot	The structure tree root in which a kid is inserted.
kid	The kid to insert.
insertAfter	Position after which the kid is inserted. If **element** currently has no kids, **insertAfter** is ignored.

Return Value

None

Exceptions

Various

Notifications

None

Header File

PDSWriteCalls.h

Related Methods

PDSTreeRootRemoveKid
PDSTreeRootReplaceKid

Availability

Available if **PI_PDS_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDSTreeRootRemoveClassMap

```
void PDSTreeRootRemoveClassMap (PDSTreeRoot treeRoot);
```

Description

Removes the **PDSClassMap** of the specified structure tree root element. Does nothing if one does not exist.

Parameters

treeRoot	The structure tree root whose **PDSClassMap** is removed.

Return Value

None

Exceptions

Various

Notifications

None

Header File

PDSWriteCalls.h

Related Methods

PDSTreeRootCreateClassMap

Availability

Available if **PI_PDS_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDSTreeRootRemoveKid

```
void PDSTreeRootRemoveKid (PDSTreeRoot treeRoot,
PDSElement kid);
```

Description

Removes the specified kid element from the specified structure tree root.

Parameters

treeRoot	The structure tree root whose kid is removed.
kid	The kid to remove.

Return Value

None

Exceptions

Various

Notifications

None

Header File

PDSWriteCalls.h

Related Methods

PDSTreeRootInsertKid
PDSTreeRootReplaceKid

Availability

Available if **PI_PDS_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDSTreeRootRemoveRoleMap

```
void PDSTreeRootRemoveRoleMap (PDSTreeRoot treeRoot);
```

Description

Removes the **PDSRoleMap** of the specified structure tree root element. Does nothing if one does not exist.

Parameters

treeRoot	The structure tree root whose **PDSRoleMap** is removed.

Return Value

None

Exceptions

Various

Notifications

None

Header File

PDSWriteCalls.h

Related Methods

PDSTreeRootCreateRoleMap
PDSTreeRootGetRoleMap

Availability

Available if **PI_PDS_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

PDSTreeRootReplaceKid

```
void PDSTreeRootReplaceKid (PDSTreeRoot treeRoot,
PDSElement oldKid, PDSElement newKid);
```

Description

Replaces structural element **oldKid** with element **newKid** as a kid of **treeRoot**.

Parameters

treeRoot	The structure tree root whose kid is replaced.
oldKid	The kid to replace.
newKid	The kid that is replacing **oldKid**.

Return Value

None

Exceptions

Various

Notifications

None

Header File

PDSWriteCalls.h

Related Methods

PDSTreeRootInsertKid
PDSTreeRootRemoveKid

Availability

Available if **PI_PDS_WRITE_VERSION** (in PIRequir.h) is set to **0x00040000** or higher.

Macintosh-specific Methods

Macintosh-specific Methods

AVAppEnumSystemFonts

```
void AVAppEnumSystemFonts (ASUns32 flags,
AVSystemFontEnumProc enumProc, void* clientData);
```

Description

Enumerates a list of fonts that are installed in the system. These are the fonts that are available for use by Acrobat. This method does *not* enumerate fonts that have been extracted or fauxed by Acrobat.

Parameters

flags	For future expansion. Must be zero.
enumProc	Client provided callback to call for each system font.
clientData	Client data for **enumProc**.

Return Value

None

Exceptions

None

Notifications

None

Header File

MacCalls.h

Related Methods

PDEnumSysFonts

Availability

Available if **PI_MACINTOSH_VERSION** (in PIRequir.h) is set to **0x00020002** or higher.

AVAppHandleAppleEvent

```
void AVAppHandleAppleEvent (AppleEvent* appleEvent,
DescType eventClass, DescType eventId, AppleEvent* replyEvent,
OSErr* err);
```

Description

Handles Apple events that are sent to the Acrobat viewer. Plug-ins that wish to handle their own Apple events do so by using **HFTReplaceEntry** to replace this method. If your replacement method does not wish to handle an Apple event it receives, it must pass the Apple event along to the Acrobat viewer by using the **CALL_REPLACED_PROC** macro.

For further information, see “Application-Defined Routines” in the “Responding to Apple Events” chapter of *Inside Macintosh: Interapplication Communication*.

If a plug-in wishes to get/replace any of the four required Apple events, it must use Macintosh toolbox calls such as **AEGetEventHandler** and **AESetEventHandler**.

Plug-ins can also support AppleScript; the Acrobat viewer contains an ‘scsz’ resource, and plug-ins can handle the **GetAETE** event to append information about scriptable events they provide.

Parameters

appleEvent	The Apple event that was sent to the Acrobat viewer.
eventClass	The event class of **appleEvent**.
eventID	The event ID of **appleEvent**.
replyEvent	An event to send back to the application that sent **appleEvent**. Add parameters to this event, if appropriate.
err	A value indicating whether or not the Apple event was handled successfully. Return the value **noErr** (defined by Apple, not in the Acrobat SDK) if the Apple event was handled successfully. See *Inside Macintosh: Interapplication Communication*. **err** is the value returned by the function **MyEventHandler** in that section. In the Acrobat core API, it is returned as a parameter rather than as a function’s return value.

Return Value

None

Exceptions

None

Notifications

None

Header File

`MacCalls.h`

Related Methods

None

Availability

Available if **`PI_MACINTOSH_VERSION`** (in **`PIRequir.h`**) is set to **`0x00020000`** or higher.

AVRectToRect

```
void AVRectToRect (const AVRect* avr, Rect* rect);
```

Description

Converts an **AVRect** into a QuickDraw **rect**.

Parameters

avr	Pointer to the **AVRect** to convert to a **Rect**.
rect	*(Filled by the method)* The **Rect** corresponding to **avr**.

Return Value

None

Exceptions

Numerous

Notifications

Numerous

Header File

MacCalls.h

Related Methods

RectToAVRect

Availability

Available if **PI_MACINTOSH_VERSION** (in **PIRequir.h**) is set to **0x00020000** or higher.

AVWindowGetCursorAtPoint

```
AVCursor AVWindowGetCursorAtPoint (AVWindow win, ASInt32 xHit,
ASInt32 yHit);
```

Description

Queries the **AVWindow** for the appropriate cursor for display at the given point (in the **AVWindow**'s device coordinate space).

Parameters

win	The **AVWindow** to query.
xHit	*x*-coordinate of point in **win**.
yHit	*y*-coordinate of point in **win**.

Return Value

The **AVCursor** appropriate for the specified point in the window.

Exceptions

Various, depending on the method called.

Notifications

None

Header File

AVCalls.h

Related Methods

None

Availability

Available if **PI_MACINTOSH_VERSION** (in PIRequir.h) is set to **0x00020002** or higher.

RectToAVRect

```
void RectToAVRect (const Rect* rect, AVRect* avr);
```

Description

Converts a Quickdraw **rect** into an **AVRect**.

Parameters

rect	Pointer to a **Rect** to convert to an **AVRect**.
avr	*(Filled by the method)* Pointer to the **AVRect** corresponding to **rect**.

Return Value

None

Exceptions

None

Notifications

None

Header File

MacCalls.h

Related Methods

AVRectToRect

Availability

Available if **PI_MACINTOSH_VERSION** (in **PIRequir.h**) is set to **0x00020000** or higher.

UNIX-specific Methods

UNIX-specific

UnixAppAddModifierCallback

```
void UnixAppAddModifierCallback (XtCallbackProc callback,
XtPointer closure);
```

Description

Registers a callback to call when a KeyEvent that specifies a modifier key is dispatched. The modifier state can be queried with **AVSysGetModifiers** or **XQueryPointer**.

The callback will be called even though the state of the modifiers may not have actually changed. For example, if both the left and right control keys are depressed, then releasing one of them causes the callbacks to be called, even though the state has not changed.

Parameters

callback	The procedure to call. Must be declared in the form: **static void UnixPageViewModifierCallback (Widget widget, XtPointer clientData, XtPointer callData)** where **callData** is an **eventPtr**, and **widget** is the acrobat viewer's shell widget (as returned by **UnixAppGetAppShellWidget**).
closure	User-supplied data to pass (as **clientData**) to **proc** each time it is called.

Return Value

None

Exceptions

genErrNoMemory

Notifications

None

Header File

UnixCalls.h

Related Methods

UnixAppRemoveModifierCallback

Availability

Available if **PI_UNIX_VERSION** (in **PIRequir.h**) is set to **0x00020000** or higher.

UnixAppClipboardGetItemId

```
long UnixAppClipboardGetItemId (Display** displayPtr,
Window* windowPtr);
```

Description

Gets the item_id, display, and window needed to call **XmClipboardCopy** during a Copy or Cut operation of a custom selection server (see **AVDocSelectionServer**).

The Acrobat viewer will have already started the Motif Clipboard Copy or Cut operation by calling **XmClipboardStartCopy** before calling the selection server's **AVDocSelectionCopyProc** or **AVDocSelectionCutProc** function. When the Copy or Cut function returns, the Acrobat viewer calls **XmClipboardEndCopy**.

Parameters

displayPtr	*(Filled by the method)* The clipboard's display.
windowPtr	*(Filled by the method)* The clipboard's window.

Return Value

The item_id.

Exceptions

None

Notifications

None

Header File

UnixCalls.h

Related Methods

None

Availability

Available if **PI_UNIX_VERSION** (in **PIRequir.h**) is set to **0x00020000** or higher.

UnixAppDispatchEvent

```
ASBool UnixAppDispatchEvent (XEvent* eventPtr);
```

Description

A wrapper function for **XtDispatchEvent**.

The Acrobat viewer needs to look at every event before it is dispatched by **libXt**. If a plug-in needs to dispatch events, it must dispatch them by either calling **UnixAppDispatchEvent** or **UnixAppProcessEvent**.

Parameters

eventPtr	The event.

Return Value

true if the event was dispatched, **false** if no handler was found to dispatch the event to.

Exceptions

None

Notifications

None

Header File

UnixCalls.h

Related Methods

UnixAppProcessEvent

Availability

Available if **PI_UNIX_VERSION** (in **PIRequir.h**) is set to **0x00020000** or higher.

UnixAppGetAppShellWidget

```
Widget UnixAppGetAppShellWidget (void);
```

Description

Gets the application shell widget created when the Acrobat viewer called **XtAppInitialize**. The widget can be used to get the display, screen, **XtAppContext**, and so forth. Each plug-in should create its own application shell widget, which will be the parent widget for all dialogs the plug-in creates.

Parameters

None

Return Value

The Acrobat viewer's application shell widget.

Exceptions

None

Notifications

None

Header File

UnixCalls.h

Related Methods

UnixAppAddModifierCallback

Example

```
#define PLUG_IN_CLASS "Foo"

static String fooFallbackResources[] = {
"Foo*XmText.background:green",
"Foo*shadowThickness:5",
NULL
};

static Widget fooAppShellWidget;

FooInit()
{
Widget appShellWidget = UnixAppGetAppShellWidget();

...

UnixAppLoadPlugInAppDefaults(PLUG_IN_CLASS, fooFallbackResources);

fooAppShellWidget = XtVaAppCreateShell(
XtName(appShellWidget), PLUG_IN_CLASS,
applicationShellWidgetClass, XtDisplay(appShellWidget),
XmNmappedWhenManaged, False, XmNx,
WidthOfScreen(XtScreen(appShellWidget)) / 2, XmNy,
HeightOfScreen(XtScreen(appShellWidget)) / 2, XmNwidth, 1,XmNheight, 1,
NULL);

XtRealizeWidget(fooAppShellWidget);

...
}
```

Note, setting the x, y, width and height will cause all dialogs to be centered on the screen. Also, setting **XmNmappedWhenManaged** to **false** makes it invisible (that is, unmapped).

Availability

Available if **PI_UNIX_VERSION** (in **PIRequir.h**) is set to **0x00020000** or higher.

UnixAppGetPlugInFilename

```
char* UnixAppGetPlugInFilename (ASExtension thePI);
```

Description

Gets the plug-in's filename. The directory can be used to find auxiliary files for that plug-in.

The Acrobat viewer searches all the directories specified in the **systemPlugInPath** and **userPlugInPath** resources to find plug-ins.

Parameters

thePI	The **gExtensionID** extension registering the plug-in.

Return Value

The plug-in's filename. The string returned must not be altered or freed.

Exceptions

None

Notifications

None

Header File

UnixCalls.h

Related Methods

None

Availability

Available if **PI_UNIX_VERSION** (in **PIRequir.h**) is set to **0x00020000** or higher.

UnixAppLoadPlugInAppDefaults

```
void UnixAppLoadPlugInAppDefaults (String className,
String* fallbackResources);
```

Description

Loads the system and user application defaults for a plug-in into the screen resource database.

The screen resource database is shared by all plug-ins, and the Acrobat viewer, so name space is important.

Application default filenames are generated from the **XFILESEARCHPATH** and **XUSERFILESEARCHPATH** environment variables, and the **className** parameter.

Parameters

className	Should be the same as the class name used to create the plug-in's application shell widget.
fallbackResources	**NULL**-terminated array of resource specification strings to use if the system application default file is not found. See **XtAppInitialize** for more information. **fallbackResources** should always start with the class name of the plug-in so they do not interfere with other plug-ins, or Acrobat's resources. That is why it is suggested to create an application shell widget for each plug-in, with a unique class name.

Return Value

None

Exceptions

genErrNoMemory

Notifications

None

Header File

UnixCalls.h

Related Methods

UnixSysPrefInit
UnixSysPrefUpdate

Example

```
#define PLUG_IN_CLASS "Foo"

static String fooFallbackResources[] = {
"Foo*XmText.background:green",
"Foo*shadowThickness:5",
NULL
};

static Widget fooAppShellWidget;

FooInit()
{
Widget appShellWidget = UnixAppGetAppShellWidget();

...

UnixAppLoadPlugInAppDefaults(PLUG_IN_CLASS, fooFallbackResources);

fooAppShellWidget = XtVaAppCreateShell(
XtName(appShellWidget), PLUG_IN_CLASS,
applicationShellWidgetClass, XtDisplay(appShellWidget),
XmNmappedWhenManaged, False,XmNx,
WidthOfScreen(XtScreen(appShellWidget)) / 2, XmNy,
HeightOfScreen(XtScreen(appShellWidget)) / 2, XmNwidth, 1, XmNheight, 1,
NULL);

XtRealizeWidget(fooAppShellWidget);

...
}
```

Availability

Available if **PI_UNIX_VERSION** (in **PIRequir.h**) is set to **0x00020000** or higher.

UnixAppProcessEvent

```
void UnixAppProcessEvent (XtAppContext appContext,
XtInputMask mask);
```

Description

A wrapper function for **XtAppProcessEvent**.

The Acrobat viewer needs to look at every event before it is dispatched by **libXt**. If a plug-in needs to dispatch events, it must dispatch them by either calling **UnixAppDispatchEvent** or **UnixAppProcessEvent**.

Parameters

appContext	The application context that identifies the application; same as the parameter passed to **XtAppProcessEvent**.
mask	A mask specifying which events to handle; same as the parameter passed to **XtAppProcessEvent**.

Return Value

None

Exceptions

None

Notifications

None

Header File

UnixCalls.h

Related Methods

UnixAppDispatchEvent

Availability

Available if **PI_UNIX_VERSION** (in **PIRequir.h**) is set to **0x00020000** or higher.

UnixAppRemoveModifierCallback

```
void UnixAppRemoveModifierCallback (XtCallbackProc callback,
XtPointer closure);
```

Description

Removes a callback added by **UnixAppAddModifierCallback**. Both **closure** and **callback** must match the values passed in the call to **UnixAppAddModifierCallback**.

Parameters

callback	The callback to remove.
closure	User-supplied data that was passed in the call to **UnixAppAddModifierCallback**.

Return Value

None

Exceptions

None

Notifications

None

Header File

UnixCalls.h

Related Methods

UnixAppAddModifierCallback

Availability

Available if **PI_UNIX_VERSION** (in **PIRequir.h**) is set to **0x00020000** or higher.

UnixAppWaitForWm

```
void UnixAppWaitForWm (Widget shellWidget);
```

Description

Dispatches events until the shell is mapped or the time out specified by the shell's **XtNwaitForWm** and **XmNwmTimeout** has expired.

This method can be used to wait for the window manager to map the shell window when bringing up a dialog.

Parameters

shellWidget	Must be a ShellWidgetClass widget, and it must be realized.

Return Value

None

Exceptions

None

Notifications

None

Header File

UnixCalls.h

Related Methods

None

Availability

Available if **PI_UNIX_VERSION** (in **PIRequir.h**) is set to **0x00020000** or higher.

UnixSysGetConfigName

```
char* UnixSysGetConfigName (void);
```

Description

Gets the Acrobat viewer's configuration name. The name will be one of:

SunOS — **sparcsun**
Solaris — **sparcsolaris**
HP-UX — **hppahpux**

The Acrobat viewer's launch shell script uses **uname** to set the configuration name in the environment variable **ACRO_CONFIG**.

Auxiliary files can be found by concatenating the installation directory with the configuration name sub-directory:

```
"<installation_dir>/<config_name>"
```

Parameters

None

Return Value

The Acrobat viewer's configuration name.

Exceptions

None

Notifications

None

Header File

UnixCalls.h

Related Methods

None

Availability

Available if **PI_UNIX_VERSION** (in **PIRequir.h**) is set to **0x00020000** or higher.

UnixSysGetCursor

```
Cursor UnixSysGetCursor (Widget widget, char* resourceName,
char* defaultName, char* defaultBits, char* defaultMaskBits,
unsigned int defaultWidth, unsigned int defaultHeight,
int defaultHotX, int defaultHotY);
```

Description

A convenience method for getting internationalized cursors. It sets up a **XtResource** specification with the **resourceName** and **defaultName** parameters, then calls **XtGetSubresources** with the name **cursor** and class **Cursor**.

The cursor name returned by **XtGetSubresources** is used to find the cursor bitmap by calling **XmGetPixmapByDepth**, which first checks the Motif image cache. If not found in the image cache, then **XmGetPixmapByDepth** searches for an **xbm** file. If the cursor name is not an absolute filename (that is, does not start with '/'), then **XmGetPixmapByDepth** uses the environment variable **XBMLANGPATH** to find it.

If a bitmap is found, then **UnixSysGetCursor** appends **Mask** to the bitmap name to find the cursor mask bitmap, otherwise it uses the **defaultBits** and **defaultMaskBits** to create a cursor.

This method does not cache its results; a new cursor is created each time it is called.

Parameters

widget	The widget to pass to **XtGetSubresources**.
resourceName	Used to create an **XtResource** specification to locate the cursor.
defaultName	Used to create an **XtResource** specification to locate the cursor.
defaultBits	Bitmap used for the cursor if the requested cursor cannot be found. It is passed to **XCreateBitmapFromData**.
defaultMaskBits	Bitmap used as the cursor mask if the requested cursor cannot be found. It is passed to **XCreateBitmapFromData**.
defaultWidth	Cursor width if the requested cursor cannot be found. It is passed to **XCreateBitmapFromData**.
defaultHeight	Cursor width if the requested cursor cannot be found. It is passed to **XCreateBitmapFromData**.
defaultHotX	*x*-coordinate of the cursor's hot spot if the requested cursor cannot be found. It is passed to **XCreatePixmapCursor**.

defaultHotY	*y*-coordinate of the cursor's hot spot if the requested cursor cannot be found. It is passed to **XCreatePixmapCursor**.

Return Value

The requested cursor.

Exceptions

genErrNoMemory

Notifications

None

Header File

UnixCalls.h

Related Methods

None

Availability

Available if **PI_UNIX_VERSION** (in **PIRequir.h**) is set to **0x00020000** or higher.

UnixSysGetCwd

```
char* UnixSysGetCwd (void);
```

Description

Gets the current working directory. This method tries to eliminate automounter **tmp** directories and symbol links. Using **stat**, it checks if the environment variable **PWD** specifies the same directory returned by **getcwd**.

Parameters

None

Return Value

The current working directory.

Exceptions

genErrNoMemory

Notifications

None

Header File

UnixCalls.h

Related Methods

UnixSysGetHomeDirectory

Availability

Available if **PI_UNIX_VERSION** (in **PIRequir.h**) is set to **0x00020000** or higher.

UnixSysGetHomeDirectory

```
char* UnixSysGetHomeDirectory (void);
```

Description

Gets the home directory of the user running the Acrobat viewer. If the **HOME** environment variable is set, its value is returned. Otherwise the method looks in the **passwd** database.

Parameters

None

Return Value

The user's home directory. The string returned by this method must not be altered or freed.

Exceptions

None

Notifications

None

Header File

UnixCalls.h

Related Methods

UnixSysGetCwd
UnixSysGetHostname

Availability

Available if **PI_UNIX_VERSION** (in **PIRequir.h**) is set to **0x00020000** or higher.

UnixSysGetHostname

```
char* UnixSysGetHostname (void);
```

Description

Gets the host name.

Parameters\

None

Return Value

The host name.

Exceptions

None

Notifications

None

Header File

`UnixCalls.h`

Related Methods

UnixSysGetHomeDirectory

Availability

Available if **PI_UNIX_VERSION** (in **PIRequir.h**) is set to **0x00020000** or higher.

UnixSysGetIcon

```
Pixmap UnixSysGetIcon (Widget widget, char* resourceName,
char* defaultName, char* defaultBits, unsigned int defaultWidth,
unsigned int defaultHeight);
```

Description

A convenience method for getting internationalized icons, which are bitmaps (pixel maps with depth 1). Use **UnixSysGetPixmap** for pixel maps with depth greater than 1.

This method sets up an **XtResource** specification with the **resourceName** and **defaultName** parameters, then calls **XtGetSubresources** with the name **icon** and class **Icon**.

The icon name returned by **XtGetSubresources** is used to find the icon by calling **XmGetPixmapByDepth**, which first checks the Motif image cache. If not found in the image cache, then **XmGetPixmapByDepth** searches for an **xbm** file. If the cursor name is not an absolute filename (that is, does not start with '/'), then **XmGetPixmapByDepth** uses the environment variable **XBMLANGPATH** to find it.

If an icon is not found, **defaultBits** is used to create an icon.

This method does not cache its results, a new icon will be created each time it is called.

Parameters

widget	Widget, as passed to **XtGetSubresources**.
resourceName	Used to create an **XtResource** specification for the cursor.
defaultName	Used to create an **XtResource** specification for the cursor.
defaultBits	Bitmap used for the icon if the requested icon is not found. Passed to **XCreateBitmapFromData**.
defaultWidth	Width used for the default icon if the requested icon is not found. Passed to **XCreateBitmapFromData**.
defaultHeight	Height used for the default icon if the requested icon is not found. Passed to **XCreateBitmapFromData**.

Return Value

The requested icon.

Exceptions

None

Notifications

None

Header File

`UnixCalls.h`

Related Methods

`UnixSysGetPixmap`

Availability

Available if **`PI_UNIX_VERSION`** (in **`PIRequir.h`**) is set to **`0x00020000`** or higher.

UnixSysGetInstallDirectory

```
char* UnixSysGetInstallDirectory (void);
```

Description

Gets the directory in which the Acrobat viewer is installed. The launch shell script sets the installation directory in the environment variable **ACRO_INSTALL_DIR**.

Auxiliary files can be found by concatenating the installation directory with the configuration name sub-directory:

```
"<installation_dir>/<config_name>"
```

Parameters

None

Return Value

The Acrobat viewer's installation directory.

Exceptions

None

Notifications

None

Header File

UnixCalls.h

Related Methods

UnixSysGetHomeDirectory

Availability

Available if **PI_UNIX_VERSION** (in **PIRequir.h**) is set to **0x00020000** or higher.

UnixSysGetPixmap

```
Pixmap UnixSysGetPixmap (Widget widget, char* resourceName,
char* defaultFilename, char** defaultXpmData,
int defaultXpmDataCount, unsigned int* widthPtr,
unsigned int* heightPtr);
```

Description

A convenience method for getting internationalized pixel maps of depth greater than 1. This method is intended for displaying graphics in an About box. The pixel map will be created with the same depth as the widget. Use **UnixSysGetIcon** for bitmaps (that is, pixel maps with depth 1).

This method sets up an **XtResource** specification with the **resourceName** and **defaultFilename** parameters, then calls **XtGetSubresources** with the name **pixmap** and class **Pixmap**.

If the pixmap filename returned by **XtGetSubresources** exists and is a valid **xbm** or **xpm** file, then a pixmap will be created. Otherwise **defaultXpmData** is used.

If a gray scale visual (or the application is in grayscale mode because it could not allocate enough colors, see color cube resources for more info), then the color map key **m** will be used in the **xpm** file (or data), otherwise **c** will be used.

XLookUpColor is used to translate the colors specified in the **xpm** color map. Because the color map is a valuable shared resource, and **UnixSysGetPixmap** was only intended for the graphics in an About box, **XAllocColor** is not called. Instead the closest color in the Acrobat viewer's color cube is used. Therefore, it is suggested that:

- All xpm files (and data) have both **c** and **m** color map keys, for both color and grayscale modes.
- Specify all colors in hexadecimal form (#rgb) to avoid problems with the Xserver's RGB database.
- Specify only the 8 fully saturated colors (black, white, red, green, …) #000, #fff, #f00, #0f0, #00f, #ff0, #0ff, #f0f, since only these colors (which are the corners of the color cube) can be guaranteed.

This method does not cache its results, a new pixmap will be created each time it is called.

Parameters

widget	The widget, passed to **XtGetSubresources**.
resourceName	Used to create an **XtResource** specification for the pixmap.

defaultFilename	Name of a file containing a default pixmap to use if the requested pixmap is not found. Used to create an **XtResource** specification for the pixmap.
defaultXpmData	A default pixmap used if the requested pixmap cannot be found.
defaultXpmCount	The number of strings in the **defaultXpmData** array, typically **XtNumber(defaultXpmData)**.
widthPtr	Width of the image. Used both if the requested pixmap is found, and for the default pixmap, if the requested pixmap is not found.
heightPtr	Height of the image. Used both if the requested pixmap is found, and for the default pixmap, if the requested pixmap is not found.

Return Value

The requested pixmap.

Exceptions

None

Notifications

None

Header File

UnixCalls.h

Related Methods

UnixSysGetIcon

Availability

Available if **PI_UNIX_VERSION** (in **PIRequir.h**) is set to **0x00020000** or higher.

UnixSysGetString

```
char* UnixSysGetString (Widget widget, char* resourceName,
char* defaultString);
```

Description

A convenience method for getting internationalized strings. It sets up an **XtResource** specification with the **resourceName** and **defaultString** parameters, then calls **XtGetSubresources** with the name **string** and class **String**.

This method does not cache its results.

Parameters

widget	The widget, passed to **XtGetSubresources**.
resourceName	Used to create an **XtResource** specification to get the string.
defaultString	Default string, used if the requested string is not found.

Return Value

The requested string, or the default string if the requested string cannot be located.

Exceptions

None

Notifications

None

Header File

UnixCalls.h

Related Methods

None

Availability

Available if **PI_UNIX_VERSION** (in **PIRequir.h**) is set to **0x00020000** or higher.

UnixSysGetTempFileDirectory

```
char* UnixSysGetTempFileDirectory (void);
```

Description

Gets the temporary file directory specified by the user. The default is "**/tmp**."

Parameters

None

Return Value

The temporary file directory.

Exceptions

None

Notifications

None

Header File

UnixCalls.h

Related Methods

UnixSysGetHomeDirectory

Availability

Available if **PI_UNIX_VERSION** (in **PIRequir.h**) is set to **0x00020000** or higher.

UnixSysPrefInit

```
void UnixSysPrefInit (Widget widget, String name,
String class, char* prefFilename, XtResourceList resources,
Cardinal numResources, XtPointer base, XrmDatabase* dbPtr,
void** resourceDataPtr);
```

Description

Reads preferences from the specified file into a resource manager database. The file format is the same as an application defaults file.

The database is then used to initialize the structure pointed to by base, which is described by resources. See **XtGetApplicationResources** for more information on the format of the resources parameter.

UnixSysPrefInit uses string resource converters to convert the string data in the preference file to the appropriate data type, as described in the resources parameter. See **XtConvertAndStore** for a list of standard converters, which are automatically registered. For other data types described in the resources parameter, a converter needs to register with **XtSetTypeConverter** prior to calling **UnixSysPrefInit**.

Furthermore, a reverse string converter needs to register prior to calling **UnixSysPrefUpdate**. The Acrobat viewer has already registered reverse string converters for the following general data types: **XtRBoolean**, **XtRBool**, **XtRDimension**, **XtRFloat**, **XtRInt**, **XtRPosition**, **XtRShort**, **XtRUnsignedChar**.

Also the following Acrobat viewer data types have both forward and reverse string converters:

```
#define XtRBoolean16 "Boolean16" /* boolean */ #define XtRAVZoomType
"AVZoomType"
#define XtRFixed "ASFixed"
#define XtRPDColorValue
"PDColorValue"
#define XtRPDPageMode "PDPageMode"
```

Finally, Motif provides the function **XmRepTypeRegister**, which will create a string converter for a list of strings to an unsigned char. Also, **XmRepTypeAddReverse** will create the reverse string converter.

Parameters

widget	The plug-in's application shell. This value is used for calling **XtConvertAndStore**.
name	The name used to create the plug-in's application shell. This value is used to match items in the database.
class	The class used to create the plug-in's application shell. This value is used to match items in the database.

prefFilename	The file from which preferences are read. If non-**NULL**, **prefFileName** must be a resource file, and its contents are merged into the database pointed to by **dbPtr**.
resources	List of resources to read from the file.
numResources	Number of resources to read from the file (that is, the number of resources specified in the **resources** parameter).
base	All string data put into the structure pointed to by base must not be altered or freed. It is suggested that a copy of all string data be made, as shown in the Example.
dbPtr	Pointer to a resource manager database. The database is created from the specified items in the preferences file. Plug-ins typically do not need access to the resource manager database created from the preference file, and can pass **NULL** for this parameter. If **dbPtr** is not **NULL**, it must point to an **XrmDatabase** variable which is initialized to **NULL**, or is a valid resource manager database with which the preference file will be combined.
resourceDataPtr	Pointer to a data buffer. Must be a valid pointer. If non-**NULL**, all resources specified in the **resources parameter** or contained in the file specified by **prefFilename** are copied into this buffer.

Return Value

None

Exceptions

None

Notifications

None

Header File

`UnixCalls.h`

Related Methods

UnixSysPrefUpdate

Example

```
#define PLUG_IN_CLASS "Foo"
#define PREF_FILE ".foorc"

static Widget fooAppShellWidget;

typedef struct {
     Boolean paletteOnLeft;
     String greetingString;
     int grossNationalDebt;
} FooDataRec;

static XtResource fooResources[] = {
{ "paletteOnLeft", "PaletteOnLeft",
XtRBoolean, sizeof(Boolean),
XtOffsetOf(FooDataRec, paletteOnLeft),
XtRImmediate, True },
{ "greetingString", "GreetingString",
XtRString, sizeof(String),
XtOffsetOf(FooDataRec, greetingString),
XtRImmediate, "Hello" },
{ "grossNationalDebt","GrossNationalDebt", XtRInt, sizeof(int),
XtOffsetOf(FooDataRec, grossNationalDebt), XtRImmediate, MAX_INT },
};

static void* fooResourceData;
static String fooPrefFilename;
static String fooFallbackResources[] = {
"Foo*XmText.background:green",
"Foo*shadowThickness:5",
NULL
};

FooDataRec fooDataRec;

FooInit()
{
Widget appShellWidget = UnixAppGetAppShellWidget(); String appName =
XtName(appShellWidget); String homeDir = UnixSysGetHomeDirectory();
...
UnixAppLoadPlugInAppDefaults(PLUG_IN_CLASS, fooFallbackResources);

fooAppShellWidget = XtVaAppCreateShell(
appName, PLUG_IN_CLASS,
applicationShellWidgetClass, XtDisplay(appShellWidget),
XmNmappedWhenManaged, False,
XmNx, WidthOfScreen(XtScreen(appShellWidget)) / 2, XmNy,
HeightOfScreen(XtScreen(appShellWidget)) / 2, XmNwidth, 1,
XmNheight, 1,
NULL);
```

```
XtRealizeWidget(fooAppShellWidget);

fooPrefFilename = malloc(strlen(homeDir) + 1 + strlen(PREF_FILE) + 1);
strcpy(fooPrefFilename, homeDir);
strcat(fooPrefFilename, "/");
strcat(fooPrefFilename, PREF_FILE);

UnixSysPrefInit(fooAppShellWidget, appName, PLUG_IN_CLASS,
fooPrefFilename, fooResources, XtNumber(fooResources), &fooDataRec,
NULL, &fooResourceData);

if (fooDataRec.greetingString != NULL)
{
String tmpString = malloc(strlen(fooDataRec.greetingString) + 1);

strcpy(tmpString, fooDataRec.greetingString); fooDataRec.greetingString
= tmpString;
}

...
}
FooExit()
{
...

UnixSysPrefUpdate(fooAppShellWidget, fooPrefFilename, &fooDataRec,
fooResources, XtNumber(fooResources), fooResourceData);

...
}
```

Availability

Available if **PI_UNIX_VERSION** (in **PIRequir.h**) is set to **0x00020000** or higher.

UnixSysPrefUpdate

```
void UnixSysPrefUpdate (Widget widget, char* prefFilename,
XtPointer base, XtResourceList resources,
Cardinal numResources, void* resourceData);
```

Description

Updates a preference file read in by **UnixSysPrefInit**. All the remaining parameters are the same as those passed to UnixSysPrefInit.

Data in the preference file are strings. **UnixSysPrefUpdate** uses reverse string converters (for example, int to string) to update the file. Therefore, reverse string converters need to register for all data types listed in resources prior to calling **UnixSysPrefUpdate**. The Acrobat viewer has already registered reverse string converters for the following general data types: **XtRBoolean**, **XtRBool**, **XtRDimension**, **XtRFloat**, **XtRInt**, **XtRPosition**, **XtRShort**, **XtRUnsignedChar.**

and for the following Acrobat viewer data types: **XtRBoolean16**, **XtRAVZoomType**, **XtRFixed**, **XtRPDColorValue**, **XtRPDPageMode**.

Parameters

widget	The plug-in's application shell. This value is used for calling XtConvertAndStore.
prefFileName	The filename containing the preferences.
base	Base.
resources	Resources.
numResources	Number of resources.
resourceData	Must be the data returned by **UnixSysPrefInit**.

Return Value

None

Exceptions

None

Notifications

None

Header File

UnixCalls.h

Related Methods

UnixSysPrefInit

Availability

Available if **PI_UNIX_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

Windows-specific Methods

Windows-specific Methods

WinAppEnableIdleTimer

```
ASBool WinAppEnableIdleTimer (ASBool enable);
```

Description

(Windows only) Allows a plug-in to turn the **AVAppIdle** timer on and off, which is needed when a plug-in calls another process and thus blocks Acrobat for an extended period of time.

Parameters

enable	**true** to turn the timer on, **false** to turn it off.

Return Value

The previous state of the **AVAppIdle** timer.

Exceptions

None

Notifications

None

Header File

WINCALLS.H

Related Methods

None

Availability

Available if **PI_WIN_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

WinAppGetModalParent

```
HWND WinAppGetModalParent (AVDoc doc);
```

Description

(Windows only) Gets appropriate parent for any modal dialogs created by a plug-in. This method is only useful if there is an **AVDoc**; it cannot be used, for example, to put up a modal dialog while a file is being opened.

In circumstances where there is no **AVDoc**, use the **gHWND** provided in PIMAIN.C. Although this does not give perfect results in some cases, there is no real alternative. (For example, if a file is opened in an external application's window, the dialog is not hidden if the external application is hidden.)

Parameters

doc	The **AVDoc** for a PDF file, if the dialog is acting on an PDF document, which is generally the case. The **AVDoc** must be provided so that for external documents, the viewer can parent the dialog off the external application—instead of the viewer.

Return Value

HWND for modal dialogs' parent.

Exceptions

None

Notifications

None

Header File

WINCALLS.H

Related Methods

AVAppBeginModal
AVAppEndModal

Availability

Available if **PI_WIN_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

WinAppGetPalette

```
HPALETTE WinAppGetPalette (void);
```

Description

(Windows only) Gets the application's color palette in the case where the system is running in 256 color mode or less. Used when you want to set and realize a palette in an external window before drawing to it.

Do *not* release this palette handle—it may be in use by other plug-in's.

Parameters

None

Return Value

The application's color palette. **NULL** if the system is running direct colors (15/16/24/32-bit) or no palette is being used.

Exceptions

None

Notifications

None

Header File

WINCALLS.H

Related Methods

None

Availability

Available if **PI_WIN_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

WinAppGetPrinterHDC

```
HDC WinAppGetPrinterHDC (void);
```

Description

Gets the device context for a printer, which is the **HDC** used to print a document.

Used if you need to modify the device context Acrobat creates when printing to a non-PostScript printer. You should register for the notification **PDDocWillPrintPage** and acquire the printer DC for the page you wish to modify.

Parameters

None

Return Value

The printer device context.

Exceptions

None

Notifications

None

Header File

`WinCalls.h`

Related Methods

None

Availability

Available if **PI_WIN_VERSION** (in `PIRequir.h`) is set to **0x00040000** or higher.

WinAppRegisterInterface

```
BOOL WinAppRegisterInterface (COMServer);
```

Description

(Windows only) Register a COM interface.

Parameters

COMServer	Pointer to COMServerRec.

Return Value

true if the interface was registered with Acrobat; **false** otherwise.

Exceptions

None

Notifications

None

Header File

WINCALLS.H

Related Methods

None

Availability

Available if **PI_WIN_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

WinAppRegisterModelessDialog

```
void WinAppRegisterModelessDialog (HWND dialog);
```

Description

(Windows only) Registers mode-less dialogs with the viewer so that the dialog gets the correct messages.

Parameters

dialog	**HWND** for the dialog to register.

Return Value

None

Exceptions

None

Notifications

None

Header File

WINCALLS.H

Related Methods

WinAppUnRegisterModelessDialog

Availability

Available if **PI_WIN_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

WinAppUnRegisterModelessDialog

```
void WinAppUnRegisterModelessDialog (HWND dialog);
```

Description

(Windows only) Un-registers mode-less dialogs with the viewer.

Parameters

dialog	**HWND** for the dialog to un-register.

Return Value

None

Exceptions

None

Notifications

None

Header File

WINCALLS.H

Related Methods

WinAppRegisterModelessDialog

Availability

Available if **PI_WIN_VERSION** (in PIRequir.h) is set to **0x00020000** or higher.

Callbacks

ActivateProcType

```
ACCB1 void ACCB2 ActivateProcType (AVTool tool,
ASBool persistent);
```

Description

Callback for **AVTool**. Called when this tool has become the active tool. It is legal to call **AVAppGetActiveTool** from within this method or from **DeactivateProcType**; it will return this tool object. Call **AVAppGetLastActiveTool** to get the formerly active tool object (its **DeactivateProcType** method will already have been called).

Parameters

tool	The tool to activate.
persistent	**true** if it should remain active through arbitrarily many "operations" (whatever that means for a particular tool), rather than performing a single action ("one shot") and then restoring the previously active tool, **false** otherwise.

Return Value

None

Header File

AVExpT.h

Related Callbacks

DeactivateProcType

AdjustCursorProcType

```
ACCB1 ASBool ACCB2 AdjustCursorProcType (AVTool tool,
AVPageView pageView, ASInt16 x, ASInt16 y);
```

Description

(Optional) Callback for **AVTool**. This callback controls the cursor shape when the tool is the active tool.

If omitted, the cursor specified in the tool's **cursorID** field is used.

Parameters

tool	The currently active tool.
pageView	The page view in which the cursor is currently located.
x	The x-coordinate of the current cursor location.
y	The y-coordinate of the current cursor location.

Return Value

true if you handled the cursor shape (that is, do not allow underlying layers to handle it), **false** if you did (that is, allow underlying layers to handle it).

Header File

AVExpT.h

Related Methods

AVAppRegisterTool

ASCabEnumProc

```
ACCB1 ASBool ACCB2 ASCabEnumProc (ASCab theCab,
const char* theKey, ASCabValueType itsType, void* clientData);
```

Description

Used when enumerating the values inside a cabinet.

Parameters

theCab	The cabinet being enumerated.
theKey	The key name of an entry in the cabinet.
itsType	The type of the value associated with **theKey**.
clientData	User-supplied data that was passed in to **ASCabEnum**.

Return Value

Return **true** to continue enumeration, **false** to halt enumeration.

Header File

ASExtraExpT.h

Related Callbacks

None

Related Methods

ASCabEnum

ASCabPointerDestroyProc

```
ACCB1 void ACCB2 ASCabPointerDestroyProc (void* ptr);
```

Description

A de-allocation callback that can be associated with a pointer in an **ASCab**. When the reference count of the pointer falls to zero, this callback is called to free the resources associated with the object the pointer references.

Parameters

ptr	The value stored in an **ASCab**.

Return Value

None

Header File

ASExtraExpT.h

Related Callbacks

None

Related Methods

ASCabPutPointer
ASCabGetPointerDestroyProc

ASCallbackCreateProto

ASCallback ASCallbackCreateProto(funcType, proc)

Description

Macro that creates a callback for the specified procedure.

Performs compile-time type-checking of the procedure if the **DEBUG** macro is nonzero.

NOTE: Should not be used for notifications and replacements. Use **ASCallbackCreateReplacement** and **ASCallbackCreateNotification** instead (these macros call **ASCallbackCreateProto**).

Parameters

funcType	The type of function being declared. This is used to allow compile-time type checking against the appropriate function prototype.
proc	A pointer to the user-supplied procedure for which a callback is created.

Return Value

A pointer to **ASCallback**. Needs to be saved so that it can be destroyed after use with the method **ASCallbackDestroy**.

Header File

CorCalls.h

Related Macros

ASCallbackCreateReplacement
ASCallbackCreateNotification
ACCB1
ACCB2
DEBUG

Related Methods

ASCallbackCreate
ASCallbackCreateNotification

Example

```
ASCallback pFuncType = ASCallbackCreateProto(FuncType, pMyFunction);

/* Use the pointer, then destroy */

ASCallbackDestroy(pFuncType)
```

ASCancelProc

```
ASBool ASCancelProc (void* clientData);
```

Description

This callback replaces **CancelProc**.

Callback to check for canceling operations. An **ASCancelProc** is typically passed to some method that takes a long time to complete. At frequent intervals, the method calls the **ASCancelProc**. If it returns **true**, then the method cancels its operation; if **false**, it continues.

Parameters

clientData	User-supplied data that was passed to the method that uses the **ASCancelProc**.

Return Value

true if the processing is to be canceled, **false** otherwise.

Header File

ASExpT.h

Related Callbacks

PDFLPrintCancelProc (Only available with PDF Library SDK)

Related Methods

AVAppGetCancelProc
PDDocCreateThumbs
PDDocInsertPages

ASExtensionEnumProc

```
ACCB1 ASBool ACCB2 ASExtensionEnumProc (ASExtension extension,
void* clientData);
```

Description

Enumeration function for **ASEnumExtensions**.

Parameters

extension	The **ASExtension** for a plug-in.
clientData	User-supplied data that was passed in the call to **ASEnumExtensions**.

Return Value

If **false**, enumeration halts and the **ASExtension** on which enumeration halted is returned. If **true**, enumeration continues.

Header File

CorExpt.h

Related Callbacks

None

Related Methods

ASEnumExtensions

ASFileCompletionProc

```
ACCB1 void ACCB2 ASFileCompletionProc (ASFile aFile,
const char* p, ASInt32 fileOffsetRequested,
ASInt32 countRequested, ASInt32 nBytesRead, ASInt32 error,
void* compProcClientData);
```

Description

Called when an asynchronous read or write request has completed.

Parameters

aFile	The **ASFile** for which data is read or written.
p	Pointer to the buffer provided by the client. Contains **nBytesRead** of data if **error** is zero.
fileOffsetRequested	File offset requested by the client.
countRequested	Number of bytes requested by the client.
nBytesRead	Number of bytes actually read or written.
error	Error condition if nonzero; see **AcroErr.h**.
compProcClientData	Client data parameter provided by client.

Return Value

None

Header File

ASExpT.h

Related Callbacks

ASFileSysAsyncAbortProc
ASFileSysAsyncReadProc
ASFileSysAsyncWriteProc
ASFileSysYieldProc

ASFileSysAcquireFileSysPathProc

```
ACCB1 ASPathName ACCB2 ASFileSysAcquireFileSysPathProc
(ASPathName pathName, ASFileSys newFileSys);
```

Description

Callback for **ASFileSysRec**. Used for non-local file systems. Returns an **ASPathName** on the new **ASFileSys** that refers to an image (possibly cached) of the remote file. Because of the possibility of cache flushing, you must hold a copy of the remote file's **ASPathName** for the duration of use of the local file.

NOTE: Do not remove the local file copy, since the default file system does not know about the linkage to the remote file. Removing this temporary file is left to the file system.

NOTE: The **ASPathName** returned should be released with the **ASFileSysReleasePath** method when it is no longer needed.

Parameters

pathName	The **ASPathName** for which an equivalent in **newFileSys** is obtained.
newFileSys	The file system in which an equivalent of **pathName** is obtained.

Return Value

The **ASPathName** (in **newFileSys**) for the specified file. Returns **NULL** if one can not be made.

Header File

ASExpT.h

Related Callbacks

ASFileSysCreatePathNameProc

ASFileSysAsyncAbortProc

```
ACCB1 void ACCB2 ASFileSysAsyncAbortProc (ASMDFile file);
```

Description

Callback for **ASFileSysRec**. Aborts all uncompleted asynchronous I/O requests for the specified file. This callback can be called at any time.

This callback calls each outstanding **ASIORequest**'s **ASIODoneProc** to be called with the **totalBytes** = 0 and error = -1.

Parameters

file	The file for which all uncompleted asynchronous read/write requests are aborted.

Return Value

None

Header File

ASExpT.h

Related Callbacks

ASFileSysAsyncReadProc
ASFileSysAsyncWriteProc
ASFileSysYieldProc

ASFileSysAsyncReadProc

```
ACCB1 ASInt32 ACCB2 ASFileSysAsyncReadProc (ASIORequest req);
```

Description

Callback for **ASFileSysRec**. Asynchronously reads the specified data, returning immediately after the request has been queued. The **ASFileSys** must call the **ASIODoneProc** (if one was provided) when the specified data has been read.

This callback is similar to the **ASFileSysMReadRequestProc**, except that this callback contains a caller-provided **ASIODoneProc**, and can only be used for a single byte range.

Parameters

req	Data structure specifying the data to read. Contains information about the request including the **ASMDFile**, the file offset, the buffer for the request, the number of bytes in the request and an **ASIODoneProc** and **clientData** for the **ASIODoneProc**. If the **ASIODoneProc** in **req** is non-**NULL**, and there is an error queueing the read request, the **ASIODoneProc** must *not* be called.

Return Value

0 if the request was successfully queued, otherwise returns a nonzero platform-dependent error code.

Header File

ASExpT.h

Related Callbacks

ASFileSysAsyncAbortProc
ASFileSysAsyncWriteProc
ASFileSysYieldProc

ASFileSysAsyncWriteProc

```
ACCB1 ASInt32 ACCB2 ASFileSysAsyncWriteProc (ASIORequest req);
```

Description

Callback for **ASFileSysRec**. Asynchronously writes the specified data, returning immediately after the request has been queued. The **ASFileSys** must call the **ASIODoneProc** (if one was provided) when the specified data has been written.

Parameters

req	Data structure specifying the data to write. Contains information about the request including the **ASMDFile**, the file offset, the buffer for the request, the number of bytes in the request and an **ASIODoneProc** and **clientData** for the **ASIODoneProc**. If the **ASIODoneProc** in **req** is non-**NULL**, and there is an error queueing the write request, the **ASIODoneProc** must *not* be called.

Return Value

0 if the request was successfully queued, otherwise returns a nonzero platform-dependent error code.

Header File

ASExpT.h

Related Callbacks

ASFileSysAsyncAbortProc
ASFileSysAsyncReadProc
ASFileSysYieldProc

ASFileSysClearOutstandingMReadsProc

```
ACCB1 void ACCB2 ASFileSysClearOutstandingMReadsProc
(ASMDFile file);
```

Description

Callback for **ASFileSysRec**. Used to advise a file system that the previous range of bytes requested to read are not needed, so that it may drop the read requests. The file system can continue pushing the bytes if it cannot stop the reads.

Parameters

file	The file that was being read.

Return Value

None

Header File

ASExpT.h

Related Callbacks

ASFileSysMReadRequestProc

Related Methods

ASFileRead

ASFileSysCloseProc

```
ACCB1 ASInt32 ACCB2 ASFileSysCloseProc (ASMDFile f);
```

Description

Callback for **ASFileSysRec**. This callback is responsible for closing the specified file. It is called by **ASFileClose**.

Parameters

f	The file to close.

Return Value

0 if the request was successful, otherwise returns a nonzero platform-dependent error code.

Header File

ASExpT.h

Related Callbacks

ASFileSysOpenProc

Related Methods

ASFileClose

ASFileSysCopyPathNameProc

```
ACCB1 ASPathName ACCB2 ASFileSysCopyPathNameProc
(ASPathName pathName);
```

Description

Callback for **ASFileSysRec**. Copies a pathname (not the underlying file). It is called by **ASFileSysCopyPath**.

Copying a pathname does not result in any file-level operations, and is unaffected by whether there is or is not an open file for the pathname.

NOTE: The **ASPathName** returned should be released by the **ASFileSysReleasePath** method when it is no longer needed.

Parameters

pathName	The pathname to copy.

Return Value

New copy of the pathname.

Header File

ASExpT.h

Related Methods

ASFileSysCopyPath

ASFileSysCreateFolderProc

```
ACCB1 ASInt32 ACCB2 ASFileSysCreateFolderProc
(ASPathName path);
```

Description

Called to create an empty folder at the specified path.

Parameters

path	The path of the folder to create.

Return Value

0 to denote success, some error code otherwise.

Header File

ASExpT.h

Related Callbacks

ASFileSysRemoveFolderProc

Related Methods

ASFileSysCreateFolder

ASFileSysCreatePathNameProc

```
ACCB1 ASPathName ACCB2 ASFileSysCreatePathNameProc
(ASAtom pathSpecType, const void* pathSpec,
const void* mustBeZero);
```

Description

Callback for **ASFileSysRec**. Creates an **ASPathName** based on the input type and **PDFileSpec**. Each **ASFileSys** implementation must publish the input types that it accepts. For example, the Macintosh **ASFileSys** may accept types of “SFReply *” or “FSSpecPtr,” and the MS-DOS **ASFileSys** may only accept types of “Cstring.”

NOTE: The **ASPathName** returned should be released by the **ASFileSysReleasePath** method when it is no longer needed.

Parameters

specType	The type of the input **PDFileSpec**.
fileSpec	The file specification from which to create an **ASPathName**.
mustBeZero	Reserved for future use.

Return Value

The newly-created pathname.

Header File

ASExpT.h

Related Methods

ASFileSysCreatePathName

ASFileSysDestroyFolderIteratorProc

```
ACCB1 void ACCB2 ASFileSysDestroyFolderIteratorProc
(ASFolderIterator folderIter);
```

Description

Called to release the resources associated with **folderIter**.

Parameters

folderIter	An **ASFolderIterator** object returned from a previous call to **ASFileSysFirstFolderItem**.

Return Value

None

Header File

ASExpT.h

Related Callbacks

ASFileSysFirstFolderItemProc
ASFileSysNextFolderItemProc

Related Methods

ASFileSysFirstFolderItem
ASFileSysNextFolderItem
ASFileSysDestroyFolderIterator

ASFileSysDiPathFromPathProc

```
ACCB1 char* ACCB2 ASFileSysDiPathFromPathProc
(ASPathName path, ASPathName relativeToThisPath);
```

Description

Callback for **ASFileSysRec**. Converts a pathname to a device-independent pathname. It is called by **ASFileSysDIPathFromPath**.

NOTE: The memory for the `char*` returned should be freed with the **ASfree** method when it is no longer needed.

Parameters

path	The pathname to convert to a device-independent pathname.
relativeToThisPath	The path relative to which the device-independent pathname is specified. Pass **NULL** if the device-independent pathname (for example, `c:\dir1\dir2\dir3\myfile.pdf`) is an absolute pathname instead of a relative pathname (for example, `../../dir3/myfile.pdf`).

Return Value

The device-independent pathname.

Header File

ASExpT.h

Related Methods

ASFileSysDIPathFromPath

ASFileSysDisplayStringFromPathProc

```
ACCB1 char* ACCB2 ASFileSysDisplayStringFromPathProc
(ASPathName path);
```

Description

Called to obtain a representation of a path that can be displayed by the user.

Parameters

path	The **ASPathName** in question.

Return Value

The display string or **NULL** if some error occurred. Allocated memory must be freeable with **ASfree**.

Header File

ASExpT.h

Related Callbacks

None

Related Methods

ASFileSysDisplayStringFromPath

ASFileSysDisposePathNameProc

```
ACCB1 void ACCB2 ASFileSysDisposePathNameProc
(ASPathName pathName);
```

Description

Callback for **ASFileSysRec**. It is called by **ASFileSysReleasePath**.

This callback frees any memory occupied by a pathname. It does not result in any file-level operations.

Parameters

pathName	The pathname to release.

Return Value

None

Header File

ASExpT.h

Related Methods

ASFileSysReleasePath

ASFileSysFirstFolderItemProc

```
ACCB1 ASFolderIterator ACCB2 ASFileSysFirstFolderItemProc
(ASPathName folderPath, ASFileSysItemProps props,
ASPathName* itemPath);
```

Description

Begins the process of iterating through the contents of a folder.

Parameters

folderPath	Path to the folder to be iterated through.
props	*(Filled by the callback)* Properties structure describing the object.
itemPath	*(Filled by the callback)* A newly-allocated **ASPathName** associated with the object (which the client must free). Contains an absolute path.

Return Value

ASFolderIterator object used for iterating through subsequent items. If there are no items in the folder this procedure returns **NULL**.

Header File

ASExpT.h

Related Callbacks

ASFileSysNextFolderItemProc
ASFileSysDestroyFolderIteratorProc

Related Methods

ASFileSysFirstFolderItem
ASFileSysNextFolderItem
ASFileSysDestroyFolderIterator

ASFileSysFlushProc

```
ACCB1 ASInt32 ACCB2 ASFileSysFlushProc (ASMDFile f);
```

Description

Callback for **ASFileSysRec**. Flushes data for the specified file. It is called by **ASFileFlush**.

Parameters

f	The file to flush.

Return Value

0 if the request was successful, otherwise returns a nonzero platform-dependent error code.

Header File

ASExpT.h

Related Callbacks

ASFileSysFlushVolumeProc

Related Methods

ASFileFlush

ASFileSysFlushVolumeProc

```
ACCB1 ASInt32 ACCB2 ASFileSysFlushVolumeProc
(ASPathName pathName);
```

Description

Callback for **ASFileSysRec**. Flushes the volume on which the specified file resides. This ensures that any data written to the system for the volume containing **pathName** is flushed out to the physical volume (equivalent to the Macintosh **FlushVol**, or to the UNIX **sync**). Call this after you're finished writing a complete "transaction" to force a commit.

This callback is not called directly from any plug-in API method, but is used internally by the Acrobat viewer.

Parameters

pathName	The pathname for the file whose volume is flushed.

Return Value

0 if the request was successful, otherwise returns a nonzero platform-dependent error code.

Header File

ASExpT.h

Related Callbacks

ASFileSysFlushProc

ASFileSysGetEofProc

```
ACCB1 ASInt32 ACCB2 ASFileSysGetEofProc (ASMDFile f,
ASUns32* pos);
```

Description

Callback for **ASFileSysRec**. Gets a file's current logical size. Called by **ASFileGetEOF**.

Parameters

f	The file whose logical size is obtained.
pos	*(Filled by the callback)* The file's logical size, in bytes.

Return Value

0 if the request was successful, otherwise returns a nonzero platform-dependent error code.

Header File

ASExpT.h

Related Methods

ASFileGetEOF
ASFileSetEOF

ASFileSysGetFileFlags

```
ACCB1 ASUns32 ACCB2 ASFileSysGetFileFlags (ASMDFile file);
```

Description

Callback for **ASFileSysRec**. Gets the flags for the specified file.

Parameters

file	The file whose flags are obtained.

Return Value

Bit field using **ASFile Flags**.

Header File

ASExpT.h

Related Callbacks

None

ASFileSysGetFileSysNameProc

```
ACCB1 ASAtom ACCB2 ASFileSysGetFileSysNameProc (void);
```

Description

Callback for **ASFileSysRec**. Gets this file system's name.

This callback is not called directly by any method in the plug-in API, but is used internally by the Acrobat viewer.

Parameters

None

Return Value

The **ASAtom** containing the name of this file system.

Header File

ASExpT.h

Related Methods

ASFileRegisterFileSys

ASFileSysGetItemPropsProc

```
ACCB1 ASInt32 ACCB2 ASFileSysGetItemPropsProc
(ASPathName path, ASFileSysItemProps props);
```

Description

Called to retrieve a full description of the file system object associated with **path**.

Parameters

path	The **ASPathName** associated with the object.
props	*(Filled by the callback)* Properties structure describing the object.

Return Value

0 to denote success, some error code otherwise.

Header File

ASExpT.h

Related Callbacks

None

Related Methods

ASFileSysGetItemProps

ASFileSysGetNameProc

```
ACCB1 ASInt32 ACCB2 ASFileSysGetNameProc (ASPathName pathName,
char* name, ASInt32 maxLength);
```

Description

Callback for **ASFileSysRec**. Returns a character string containing the filename for the specified **ASPathName**. The character string contains only the filename; it is not a complete pathname.

This callback is not called directly from any plug-in API method. It is used internally by the Acrobat viewer.

Parameters

pathName	The **ASPathName** for which the filename is returned.
name	*(Filled by the callback)* Character string containing the filename for **pathName**.
maxLength	Maximum number of characters that **name** can hold.

Return Value

0 if the request was successful, otherwise returns a nonzero platform-dependent error code.

Header File

ASExpT.h

Related Callbacks

ASFileSysGetFileSysNameProc

ASFileSysGetParentProc

```
ACCB1 ASPathName ACCB2 ASFileSysGetParentProc
(ASPathName path);
```

Description

Called to obtain the parent of the input path.

Parameters

path	The **ASPathName** in question.

Return Value

The parent path, or **NULL** if path is a root directory. It is the client's responsibility to free the returned **ASPathName**.

Header File

ASExpT.h

Related Callbacks

None

Related Methods

None

ASFileSysGetPosProc

```
ACCB1 ASInt32 ACCB2 ASFileSysGetPosProc (ASMDFile f,
ASUns32* pos);
```

Description

Gets the current position for the specified file. Called by **ASFileGetPos**.

Parameters

f	The file whose current position is obtained.
pos	*(Must by filled by the callback)* The current position.

Return Value

0 if the request was successful, otherwise returns a nonzero platform-dependent error code.

Header File

ASExpT.h

Related Callbacks

ASFileSysSetPosProc

Related Methods

ASFileGetPos
ASFileSetPos

ASFileSysGetStatusProc

```
ACCB1 ASUns32 ACCB2 ASFileSysGetStatusProc (ASMDFile file);
```

Description

Callback for **ASFileSysRec**. Gets the status of the specified file. This callback is used for asynchronous I/O. For example, it can indicate that an underlying file connection has been closed.

Parameters

file	The file whose status is obtained.

Return Value

The file's status. Must be one of the **ASFileStatus Flags** values.

Header File

ASExpT.h

Related Methods

ASFileRead

ASFileSysGetStorageFreeSpaceProc

```
ACCB1 ASUns32 ACCB2 ASFileSysGetStorageFreeSpaceProc
(ASPathName pathName);
```

Description

Callback for **ASFileSysRec**. Gets the amount of free space on the volume containing the specified **ASPathName**.

Parameters

pathName	The **ASPathName** for a file on the volume whose free space is obtained.

Return Value

Free space, in bytes. Because the free space is returned as an **ASUns32**, it is limited to 4 GB.

Header File

ASExpT.h

Related Callbacks

None

ASFileSysGetTempPathNameProc

```
ACCB1 ASPathName ACCB2 ASFileSysGetTempPathNameProc
(ASPathName pathName);
```

Description

Callback for **ASFileSysRec**. Returns an unique pathname suitable for use in creating temporary files.

NOTE: The **ASPathName** returned should be released by the **ASFileSysReleasePath** method when it is no longer needed.

Parameters

pathName	If **pathName** is non-**NULL**, the temporary file must be stored such that a rename of **pathName** will succeed (for example, on the same volume if renames across volumes are illegal on this file system).

Return Value

Pathname for a temporary file.

Header File

ASExpT.h

Related Callbacks

ASFileSysCopyPathNameProc

ASFileSysGetTypeAndCreatorProc

```
ACCB1 void ACCB2 ASFileSysGetTypeAndCreatorProc
(ASPathName path, unsigned long* type,
unsigned long* creator);
```

Description

Gets the file type and creator on the file. Currently only implemented on Mac.

Does not raise.

Parameters

path	Path to file.
type	*(Filled by the callback)* The file type.
creator	*(Filled by the callback)* The file creator.

Return Value

None

Header File

ASExpT.h

Related Callbacks

ASFileSysSetTypeAndCreatorProc

Related Methods

ASFileSysGetTypeAndCreator
ASFileSysSetTypeAndCreator

ASFileSysIsSameFileProc

```
ACCB1 ASBool ACCB2 ASFileSysIsSameFileProc (ASMDFile f,
ASPathName pathName, ASPathName newPathName);
```

Description

Callback for **ASFileSysRec**. Tests whether two files are the same.

Parameters

f	The **ASFile** of first file to compare (in many implementations, it may be unnecessary to use this information, **pathName** and **newPathName** provide sufficient information).
pathName	The **ASPathName** of first file to compare.
newPathName	The **ASPathName** of second file to compare.

Return Value

0 if the files are different, nonzero if they are the same.

Header File

ASExpT.h

Related Callbacks

None

ASFileSysMReadRequestProc

```
ACCB1 ASInt32 ACCB2 ASFileSysMReadRequestProc (ASMDFile file,
ASFile aFile, ASInt32* blockPairs, ASInt32 nBlockPairs);
```

Description

Callback for **ASFileSysRec**. Queues asynchronous requests for one or more byte ranges that the caller (usually the Acrobat viewer or Library) will need in the near future. This callback is important for slow file systems, such as the Web, to improve overall performance by allowing the file system to begin retrieving bytes before they are actually needed, while the Acrobat software continues processing as much as it can with the data that has already been downloaded.

This callback does not actually read the data, but merely queues the requests, starts the asynchronous code that reads the data, and returns. The asynchronous code that reads the data must use **ASFilePushData** to push the data from each byte range to the Acrobat software as soon as the data is ready.

This callback is similar to the **ASFileSysAsyncReadProc**, except that this callback contains a caller-provided **ASIODoneProc**, and can only be used for a single byte range.

Parameters

file	The file whose data is read.
aFile	The corresponding **ASFile**, for use with **ASFilePushData**.
blockPairs	An array of file offsets and byte lengths.
nBlockPairs	The number of block pairs in **blockPairs**.

Return Value

0 if the request was successfully queued, otherwise returns a nonzero platform-dependent error code.

Header File

ASExpT.h

Related Callbacks

ASFileSysAsyncReadProc

Related Methods

ASFileRead

ASFileSysNextFolderItemProc

```
ACCB1 ASBool ACCB2 ASFileSysNextFolderItemProc
(ASFolderIterator folderIter, ASFileSysItemProps props,
ASPathName* itemPath);
```

Description

Called to continue the iteration process associated with the **ASFolderIterator** object. Both **itemPath** and **props** are optional and can be **NULL** if the caller is not interested in that information.

Parameters

folderIter	An **ASFolderIterator** object returned from a previous call to **ASFileSysFirstFolderItemProc**.
props	*(Filled by the callback)* Properties structure describing the object.
itemPath	*(Filled by the callback)* A newly-allocated **ASPathName** associated with the object (which the client must free). Contains an absolute path.

Return Value

false if no other objects were found, **true** otherwise.

Header File

ASExpT.h

Related Callbacks

ASFileSysFirstFolderItemProc
ASFileSysDestroyFolderIteratorProc

Related Methods

ASFileSysFirstFolderItem
ASFileSysNextFolderItem
ASFileSysDestroyFolderIterator

ASFileSysOpenProc

```
ACCB1 ASInt32 ACCB2 ASFileSysOpenProc (ASPathName pathName,
ASUns16 mode, ASMDFile* fP);
```

Description

Callback for **ASFileSysRec**. Opens the specified file. It is called by **ASFileSysOpenFile** and **ASFileReopen**.

Parameters

pathName	The pathname for the file to open.
mode	The mode in which the file is opened. Must be an OR of the **ASFile Open Modes**.
fP	*(Filled by the callback)* The newly-opened file.

Return Value

0 if the request was successful, otherwise returns a nonzero platform-dependent error code.

Header File

ASExpT.h

Related Callbacks

ASFileSysCloseProc

Related Methods

ASFileSysOpenFile
ASFileReopen
ASFileClose

ASFileSysPathFromDIPathProc

```
ACCB1 ASPathName ACCB2 ASFileSysPathFromDIPathProc
(char* diPath, ASPathName relativeToThisPath);
```

Description

Callback for **ASFileSysRec**. Converts a device-independent pathname to an **ASPathName**. It is called by **ASFileSysPathFromDIPath**.

NOTE: The **ASPathName** returned should be released by the **ASFileSysReleasePath** method when it is no longer needed.

Parameters

diPath	Device-independent pathname to convert to an **ASPathName**.
relativeToThisPath	If **diPath** is an absolute pathname, **NULL**. If **diPath** is a relative pathname, the pathname relative to which it is specified.

Return Value

The **ASPathName** corresponding to the specified device-independent pathname.

Header File

ASExpT.h

Related Methods

ASFileSysPathFromDIPath
ASFileSysDIPathFromPath

ASFileSysReadProc

```
ACCB1 ASSize_t ACCB2 ASFileSysReadProc (void* ptr,
ASSize_t size, ASSize_t count, ASMDFile f, ASInt32* pError);
```

Description

Callback for **ASFileSysRec**. Reads data from the specified file. It is called by **ASFileRead**.

Parameters

ptr	*(Filled by the callback)* The data read from the file.
size	The size of each item to read.
count	The number of items to read.
f	The file from which data is read.
pError	*(Filled by the callback)* Error code. This value is filled only if an error occurred. In that case, it should contain an error code.

Return Value

The number of bytes read, or **0** if there was an error.

Header File

ASExpT.h

Related Callbacks

ASFileSysWriteProc

Related Methods

ASFileRead

ASFileSysRemoveFolderProc

```
ACCB1 ASInt32 ACCB2 ASFileSysRemoveFolderProc
(ASPathName path);
```

Description

Called to delete the folder at the specified path.

Parameters

path	The path of the folder to remove.

Return Value

0 to denote success, some error code otherwise

Header File

ASExpT.h

Related Callbacks

ASFileSysCreateFolderProc

Related Methods

ASFileSysRemoveFolder

ASFileSysRemoveProc

```
ACCB1 ASInt32 ACCB2 ASFileSysRemoveProc (ASPathName pathName);
```

Description

Callback for **ASFileSysRec**. Deletes a file. It is called by **ASFileSysRemoveFile**.

Parameters

pathName	The file to delete.

Return Value

0 if the request was successful, otherwise returns a nonzero platform-dependent error code.

Header File

ASExpT.h

Related Methods

ASFileSysRemoveFile

ASFileSysRenameProc

```
ACCB1 ASInt32 ACCB2 ASFileSysRenameProc (ASMDFile* f,
ASPathName oldPath, ASPathName newPath);
```

Description

Callback for **ASFileSysRec**. Renames a file. It is not called directly by any method in the plug-in API, but is used internally by the Acrobat viewer.

Parameters

f	The file to rename.
oldPath	The file's old pathname.
newPath	The file's new pathname.

Return Value

0 if the request was successful, otherwise returns a nonzero platform-dependent error code.

Header File

ASExpT.h

Related Callbacks

ASFileSysGetNameProc

ASFileSysSetEofProc

```
ACCB1 ASInt32 ACCB2 ASFileSysSetEofProc (ASMDFile f,
ASUns32 pos);
```

Description

Callback for **ASFileSysRec**. Increases or decreases the logical size of a file. It is called by **ASFileSetEOF**.

Parameters

f	The file to expand/shrink.
pos	The desired size, in bytes.

Return Value

0 if the request was successful, otherwise returns a nonzero platform-dependent error code.

Header File

ASExpT.h

Related Methods

ASFileGetEOF
ASFileSetEOF

ASFileSysSetPosProc

```
ACCB1 ASInt32 ACCB2 ASFileSysSetPosProc (ASMDFile f,
ASUns32 pos);
```

Description

Callback for **ASFileSysRec**. Sets the current position in a file (that is, the point from which data will next be read). It is called by **ASFileSetPos**.

Parameters

f	The file in which the position is set.
pos	The desired new position (specified in bytes from the beginning of the file).

Return Value

0 if the request was successful, otherwise returns a nonzero platform-dependent error code.

Header File

ASExpT.h

Related Methods

ASFileGetPos
ASFileSetPos

ASFileSysSetTypeAndCreatorProc

```
ACCB1 void ACCB2 ASFileSysSetTypeAndCreatorProc
(ASPathName path, unsigned long* type,
unsigned long* creator);
```

Description

Sets the file type and creator on the file. Currently only implemented on Macintosh. Does not raise.

Parameters

path	Path to the file.
type	File type.
creator	File creator.

Return Value

None

Header File

ASExpT.h

Related Callbacks

ASFileSysGetTypeAndCreatorProc

Related Methods

ASFileSysGetTypeAndCreator
ASFileSysSetTypeAndCreator

ASFileSysURLFromPathProc

```
ACCB1 char* ACCB2 ASFileSysURLFromPathProc (ASPathName path);
```

Description

Called to obtain the URL associated with the given **ASPathName**.

Parameters

path	The **ASPathName** in question.

Return Value

The URL or **NULL** if it cannot be determined. Allocated memory must be freeable with **ASfree**.

Header File

ASExpT.h

Related Callbacks

None

Related Methods

ASFileSysURLFromPath

ASFileSysWriteProc

```
ACCB1 ASSize_t ACCB2 ASFileSysWriteProc (void* ptr,
ASSize_t size, ASSize_t count, ASMDFile f, ASInt32* pError);
```

Description

Callback for **ASFileSysRec**. Writes data to the specified file.

Parameters

ptr	Buffer containing data to write.
size	The size of each item to write.
count	The number of items to write.
f	The file into which data is written.
pError	*(Filled by the callback)* Error.

Return Value

The number of bytes written. Returns **0** if there was an error.

Header File

ASExpT.h

Related Callbacks

ASFileSysReadProc

Related Methods

ASFileWrite

ASFileSysYieldProc

```
ACCB1 ASInt32 ACCB2 ASFileSysYieldProc (ASMDFile file);
```

Description

Callback for **ASFileSysRec**. Yields on the asynchronous I/O requests for the specified file to allow other processes a chance to process events that may be required for a file read to complete. An **ASFileSys** should implement a yield mechanism to complement asynchronous read/write requests.

In Windows, this could be a normal **PeekMessage** based yield.

In UNIX, it could mean using **select** on a file descriptor.

Parameters

file	The file whose asynchronous I/O requests are yielded.

Return Value

0 if the request was successful, otherwise returns a nonzero platform-dependent error code.

Header File

ASExpT.h

Related Callbacks

ASFileSysAsyncAbortProc
ASFileSysAsyncReadProc
ASFileSysAsyncWriteProc

Related Methods

ASFileRead

ASIODoneProc

```
ACCB1 void ACCB2 ASIODoneProc (ASIORequest req);
```

Description

Callback in **ASIORequest**. Used by the asynchronous read/write **ASFileSys** implementation. Provided by the **ASFile** implementation to the **ASFileSys**. The **ASFileSys** must call this method when an asynchronous request is completed:

- When an I/O request has some or all of its data.
- If the request is successfully queued but an error prevents it from completing.
- If the request is aborted by calling **ASFileSysAsyncAbortProc**. In this case, the **totalBytesCompleted**=0 and **pError**=-1.

If the request fails, this method must still be called, with the error. It is not called if there is an error queueing the read or write request, however.

Parameters

req	The I/O request for which data has been read/written.

Return Value

None

Header File

ASExpT.h

Related Callbacks

ASFileSysAsyncAbortProc
ASFileSysAsyncReadProc
ASFileSysAsyncWriteProc
ASFileSysYieldProc

ASProcStmDestroyProc

```
ACCB1 void ACCB2 ASProcStmDestroyProc (void* clientData);
```

Description

Callback for use by **ASProcStmWrOpen**.

Called at end of stream so you can do clean up and free allocated memory.

Parameters

clientData	User-supplied data that was passed in the call to **ASProcStmWrOpen**.

Return Value

None

Header File

ASExpt.h

Related Callbacks

ASStmProc

Related Methods

ASProcStmWrOpen

ASReportProc

```
ACCB1 void ACCB2 ASReportProc (ASReportType reportType,
ASInt32 errorCode, ASText message, ASText replacementText,
ASCab moreInfo, void* reportProcData);
```

Description

A report proc can be used to report errors, warnings, and other messages to the user. Normally a report proc will notify the user of an error using a dialog, but in some contexts (such as when batch processing) it may log the error or warning to a file, or ignore it.

It is the **ASReportProc**'s responsibility to destroy all objects passed to it, and it may do so at any time.

Parameters

reportType	The type of information that is being reported.
errorCode	An error code defined by the system or by **ASRegisterErrorString**. If **message** is not **NULL**, the **errorCode** can be **0**.
message	Specifies the text the user should read. If the **message** field is **NULL** the system will retrieve the message associated with the **errorCode**. If both **message** and **errorCode** are specified the **message** argument is used.
replacementText	If the **replacementText** is not **NULL**, the system will attempt to replace the string "%s" in the message with the replacement text. This applies whether the text is specified via the **message** argument or retrieved from the system using the **errorCode** argument.
moreInfo	Not used currently. The report proc will destroy this cabinet immediately.
reportProcData	A pointer to the data associated with the **reportProc** (which should be passed to you when you acquire the report proc).

Return Value

None

Header File

ASExtraExpT.h

Related Callbacks

None

Related Methods

AVAppGetReportProc
AVCommandGetReportProc

ASStmProc

```
ACCB1 ASInt32 ACCB2 ASStmProc (char* data, ASInt32 nData,
void* clientData);
```

Description

Callback for use by **ASProcStmRdOpen** and **ASProcStmWrOpen**. This procedure must return the number of bytes specified by **nData**, obtaining them in any way it wishes.

If your procedure reads data from a file, it is generally quite inefficient to open the file, read the bytes, then close the file each time bytes are requested. Instead, consider opening the file the first time bytes are requested from it, reading the entire file into a secondary buffer, and closing the file. When subsequent requests for data from the file are received, simply copy data from the secondary buffer, rather than re-opening the file.

Parameters

data	*(Filled by the callback)* Buffer into which your procedure must place the number of bytes specified by **nData**.
nData	Number of bytes to read from the stream and place into **data**.
clientData	User-supplied data that was passed in the call to **ASProcStmRdOpen** or **ASProcStmWrOpen**.

Return Value

The number of bytes actually read or written.

Header File

ASExpt.h

Related Callbacks

ASProcStmDestroyProc

Related Methods

ASProcStmRdOpen
ASProcStmWrOpen

AVActionCopyProc

```
ACCB1 PDAction ACCB2 AVActionCopyProc (void* actionHandlerObj,
AVDoc fromDoc, PDAction anAction, AVDoc toDoc);
```

Description

(Optional) Callback for **AVActionHandlerProcs**. Called upon to copy an action, possibly to another document. Action handlers should provide this callback to allow for copying their actions. Called by **AVDocCopyAction**.

Parameters

actionHandlerObj	User-supplied data that was passed when the action handler was registered using **AVAppRegisterActionHandler**.
fromDoc	The document whose action is copied.
anAction	The action to copy.
toDoc	The document to which the action is copied.

Return Value

The newly-created **PDAction** copy.

Header File

AVExpT.h

Related Methods

AVDocCopyAction

AVActionDoPropertiesProc

```
ACCB1 void ACCB2 AVActionDoPropertiesProc
(void* actionHandlerObj, PDAction action, AVDoc doc);
```

Description

Callback for **AVActionHandlerProcs**. Displays a user interface that allows a user to set the action's properties (for example, for a **Launch** action, set the file to launch; for a **GoTo** action, select the destination page/zoom/coordinates).

Parameters

actionHandlerObj	User-supplied data that was passed when the action handler was registered using **AVAppRegisterActionHandler**.
action	The action whose properties are set.
doc	The document in which the action is located.

Return Value

None

Header File

AVExpT.h

Related Methods

AVActionHandlerGetProcs

AVActionEnumProc

```
ACCB1 ASBool ACCB2 AVActionEnumProc (ASAtom type,
char* userName, void* clientData);
```

Description

Callback used by **AVAppEnumActionHandlers**. It is called once for each action handler.

Parameters

type	The action handler's name.
userName	The action's name, as it appears in the Acrobat viewer's user interface.
clientData	User-supplied data that was passed in the call to **AVAppEnumActionHandlers**.

Return Value

Return **true** to continue enumeration, **false** to halt enumeration.

Header File

AVExpT.h

Related Methods

AVAppEnumActionHandlers

AVActionFillActionDictProc

```
ACCB1 void ACCB2 AVActionFillActionDictProc
(void* actionHandlerObj, CosObj actionDict, AVDoc doc);
```

Description

(Required) Callback for **AVActionHandlerProcs**. This required function is called as soon as the user selects the action from the action types pop-up menu. It allows an action handler to populate a newly-created action's **actionDict**. At the time this method is called, the information needed to completely specify an action is often not yet available. As a result, this method is generally a good place to populate the **actionDict** with default values.

Parameters

actionHandlerObj	User-supplied data that was passed when the action handler was registered using **AVAppRegisterActionHandler**.
actionDict	Action dictionary to populate with default values.
doc	The document in which the action is located.

Return Value

None

Header File

AVExpT.h

Related Callbacks

None

AVActionGetButtonTextProc

```
ACCB1 ASInt32 ACCB2 AVActionGetButtonTextProc
(void* actionHandlerObj, PDAction action, char* buffer,
ASInt32 bufLen, AVDoc doc);
```

Description

Callback for **AVActionHandlerProcs**. This optional function should store into buffer a null-terminated C string which is a localized string for the “edit action” button in the action dialog.

For example, the Acrobat viewer’s built-in “OpenFile” action returns “Select File” for this string.

Parameters

actionHandlerObj	User-supplied data that was passed when the action handler was registered using **AVAppRegisterActionHandler**.
action	The action whose button text is returned.
buffer	*(Filled by the callback)* The button text.
bufLen	Length of **buffer**, in bytes.
doc	The document in which the action is located.

Return Value

The number of characters copied into **buffer**.

Header File

AVExpT.h

Related Callbacks

AVActionGetStringOneTextProc
AVActionGetStringTwoTextProc

AVActionGetInstructionsProc

```
ACCB1 ASInt32 ACCB2 AVActionGetInstructionsProc
(void* actionHandlerObj, PDAction action, char* buffer,
ASInt32 bufLen, AVDoc doc);
```

Description

Callback for **AVActionHandlerProcs**. This optional function should store into buffer a null-terminated C string which contains localized instructions for the action creation/properties dialog.

Parameters

actionHandlerObj	User-supplied data that was passed when the action handler was registered using **AVAppRegisterActionHandler**.
action	The action whose instructions are returned.
buffer	*(Filled by the callback)* The instruction text.
bufLen	Length of **buffer**, in bytes.
doc	The document in which the action is located.

Return Value

The number of characters copied into **buffer**.

Header File

AVExpT.h

Related Callbacks

AVActionPerformExProc
AVActionPerformProc

AVActionGetStringOneTextProc

```
ACCB1 ASInt32 ACCB2 AVActionGetStringOneTextProc
(void* actionHandlerObj, PDAction action, char* buffer,
ASInt32 bufLen, AVDoc doc);
```

Description

(*Optional*) Callback for **AVActionHandlerProcs**. This function should store into buffer a null-terminated C string which is a localized string placed above the “edit action” button in the action dialog. A **NULL** proc will cause the button to hide.

For example, the Acrobat viewer’s built-in “OpenFile” action returns “File N: <the current filename>” for this string.

Parameters

actionHandlerObj	User-supplied data that was passed when the action handler was registered using **AVAppRegisterActionHandler**.
action	The action whose “string 1” text is returned.
buffer	*(Filled by the callback)* The string text appearing above the button.
bufLen	Length of **buffer**, in bytes.
doc	The document in which the action is located.

Return Value

The number of characters copied into **buffer**.

Header File

AVExpT.h

Related Callbacks

AVActionGetButtonTextProc
AVActionGetStringTwoTextProc

AVActionGetStringTwoTextProc

```
ACCB1 ASInt32 ACCB2 AVActionGetStringTwoTextProc
(void* actionHandlerObj, PDAction action, char* buffer,
ASInt32 bufLen, AVDoc doc);
```

Description

Callback for **AVActionHandlerProcs**. This optional function should store into buffer a null-terminated C string which is a localized string placed below the “edit action” button in the action dialog.

For example, the Acrobat viewer’s built-in “OpenFile” action returns nothing for this string, but the built-in “GoToView” action returns a description of the current zoom type.

Parameters

actionHandlerObj	User-supplied data that was passed when the action handler was registered using **AVAppRegisterActionHandler**.
action	The action whose “string 2” text is returned.
buffer	*(Filled by the callback)* The string text appearing below the button.
bufLen	Length of **buffer**, in bytes.
doc	The document in which the action is located.

Return Value

The number of characters copied into **buffer**.

Header File

AVExpT.h

Related Callbacks

AVActionGetButtonTextProc
AVActionGetStringOneTextProc

AVActionPerformExProc

```
ACCB1 void ACCB2 AVActionPerformExProc
(void *actionHandlerObj, PDAction action, AVDoc doc,
AVActionContext context);
```

Description

Callback for **AVActionHandlerProcs**. **AVActionPerformExProc** is called instead of **AVActionPerformProc** if this callback is defined. It gets passed the context of an action, which provides information on who triggered the action.

Parameters

actionHandlerObj	User-supplied data that was passed when the action handler was registered using **AVAppRegisterActionHandler**.
action	An action to perform.
doc	The document in which the action is located.
context	The context of the action.

Return Value

None

Header File

AVExpt.h

Related Callbacks

AVActionPerformProc

AVActionPerformProc

```
ACCB1 void ACCB2 AVActionPerformProc (void* actionHandlerObj,
PDAction action, AVDoc doc);
```

Description

Callback for **AVActionHandlerProcs**. Performs the action.

Parameters

actionHandlerObj	User-supplied data that was passed when the action handler was registered using **AVAppRegisterActionHandler**.
action	The action to perform.
doc	The document in which the action is located.

Return Value

None

Header File

AVExpT.h

Related Callbacks

AVActionGetInstructionsProc
AVActionPerformExProc

AVAnnotHandlerAdjustCursorProc

```
ACCB1 ASBool ACCB2 AVAnnotHandlerAdjustCursorProc
(AVAnnotHandler annotHandler, PDAnnot anAnnot,
AVPageView pageView, ASInt16 xHit, ASInt16 yHit);
```

Description

(Optional) Callback for **AVAnnotHandler**. It controls the cursor shape when the cursor is within the annotation. If **NULL**, the annotation behaves as if the **AdjustCursor** callback returned **false**.

Parameters

annotHandler	The annotation handler responsible for this annotation.
anAnnot	The annotation containing the cursor.
pageView	The **AVPageView** in which the annotation is located.
xHit	The cursor's current x-coordinate.
yHit	The cursor's current y-coordinate.

Return Value

true if the callback handled the adjust cursor event, **false** otherwise. The callback would return **false**, for example, if the annotation is irregularly shaped and the cursor is not currently over the real annotation even though it is within the rectangular bounding box that the Acrobat viewer uses to specify annotations.

Header File

AVExpT.h

Related Callbacks

None

AVAnnotHandlerCopyProc

```
ACCB1 PDAnnot ACCB2 AVAnnotHandlerCopyProc
(AVAnnotHandler annotHandler, AVDoc fromDoc, PDAnnot anAnnot,
AVDoc toDoc);
```

Description

(Optional) Callback for **AVAnnotHandler**. Called upon to copy an annotation, possibly to another document. Annotation handlers should provide this callback to allow for copying their annotations. Called by **AVDocCopyAnnot**.

Parameters

annotHandler	The annotation handler responsible for this annotation.
fromDoc	The document whose annotation is copied.
anAnnot	The annotation to copy.
toDoc	The document to which the annotation is copied.

Return Value

The newly-created **PDAnnot** copy.

Header File

AVExpT.h

Related Methods

AVDocCopyAnnot

AVAnnotHandlerCanPerformOpProc

```
ACCB1 ASBool ACCB2 AVAnnotHandlerCanPerformOpProc
(AVAnnotHandler annotHandler, PDAnnot annot,
AVPageView pageView, AVAnnotOp annotOp, AVAnnotOpData opData);
```

Description

Called to determine if this annotation can perform the specified operation.

Parameters

annotHandler	The annotation handler responsible for this annotation.
annot	The annotation.
pageView	The **AVPageView** in which the annotation is located.
annotOp	The operation to be performed.
opData	The data associated with the operation.

Return Value

true if the operation can be performed; **false** otherwise.

Header File

AVExpT.h

Related Callbacks

AVAnnotHandlerPerformOpProc

Related Methods

None

AVAnnotHandlerCursorEnterProc

```
ACCB1 void ACCB2 AVAnnotHandlerCursorEnterProc
(AVAnnotHandler annotHandler, PDAnnot anAnnot,
AVPageView pageView);
```

Description

(Optional) Callback for **AVAnnotHandler**. Called whenever the cursor moves over an annotation handled by this annotation handler.

Parameters

annotHandler	The annotation handler responsible for this annotation.
anAnnot	The annotation.
pageView	The **AVPageView** in which the annotation is located.

Return Value

None

Header File

AVExpT.h

Related Callbacks

AVAnnotHandlerCursorExitProc

AVAnnotHandlerCursorExitProc

```
ACCB1 void ACCB2 AVAnnotHandlerCursorExitProc
(AVAnnotHandler annotHandler, PDAnnot anAnnot,
AVPageView pageView);
```

Description

(Optional) Callback for **AVAnnotHandler**. Called whenever the cursor moves off an annotation handled by this annotation handler.

Parameters

annotHandler	The annotation handler responsible for this annotation.
anAnnot	The annotation the cursor is exiting from.
pageView	The **AVPageView** in which the annotation is located.

Return Value

None

Header File

AVExpT.h

Related Callbacks

AVAnnotHandlerCursorEnterProc

AVAnnotHandlerDeleteInfoProc

```
ACCB1 void ACCB2 AVAnnotHandlerDeleteInfoProc
(AVAnnotHandler avanh, AVAnnotHandlerInfo info);
```

Description

(Optional) Callback for **AVAnnotHandler**. Deletes information associated with an annotation.

To effectively use a **PDAnnotHandler** associated with an annotation, its **AVAnnotHandler** must have its **AVAnnotHandlerGetInfoProc** and **AVAnnotHandlerDeleteInfoProc** callbacks defined.

Parameters

avanh	The annotation handler responsible for this annotation.
info	Information associated with the annotation.

Return Value

None

Header File

AVExpT.h

Related Callbacks

AVAnnotHandlerGetInfoProc
PDAnnotHandlerDeleteAnnotInfoProc

Related Methods

None

AVAnnotHandlerDoClickProc

```
ACCB1 ASBool ACCB2 AVAnnotHandlerDoClickProc
(AVAnnotHandler annotHandler, PDAnnot hitAnnot,
AVPageView pageView, ASInt16 xHit, ASInt16 yHit,
ASInt16 flags, ASInt16 clickNo);
```

Description

(Optional) Callback for **AVAnnotHandler**. It handles both left and right mouse button clicks within the annotation. If **NULL**, the annotation behaves as if the callback returned **false**.

Parameters

annotHandler	The annotation handler responsible for this annotation.
hitAnnot	The annotation in which the mouse was clicked.
pageView	The **AVPageView** in which the annotation is located.
xHit	The x-coordinate of the mouse click.
yHit	The y-coordinate of the mouse click.
flags	Indicates which modifier keys are pressed. Must be an OR of the **Modifier Keys** values.
clickNo	1 if this is a single click, 2 if a double click, 3 if triple click.

Return Value

true if the callback handled the mouse click, **false** if it did not. If the callback does not handle the click, it is passed to any annotation at the same location in lower layers.

Header File

AVExpT.h

Related Callbacks

AVAnnotHandlerDoKeyDownExProc

AVAnnotHandlerDoKeyDownExProc

```
ACCB1 ASBool ACCB2 AVAnnotHandlerDoKeyDownExProc
(AVAnnotHandler annotHandler, PDAnnot annot,
AVPageView pageView, ASUns16 key, ASInt16 flags);
```

Description

Called for each keystroke received when an annotation has focus.

Parameters

annotHandler	The annotation handler responsible for this annotation.
annot	The annotation.
pageView	The **AVPageView** in which the annotation is located.
key	The operation to be performed.
flags	Indicates which modifier keys are pressed. See **AVSysGetModifiers**.

Return Value

true if the callback handled the keystroke, **false** otherwise.

Header File

AVExpT.h

Related Callbacks

AVAnnotHandlerDoKeyDownProc

Related Methods

None

AVAnnotHandlerDoKeyDownProc

```
ACCB1 ASBool ACCB2 AVAnnotHandlerDoKeyDownProc
(AVAnnotHandler annotHandler, PDAnnot anAnnot, ASUns16 key,
ASInt16 flags);
```

Description

(Optional) Callback for **AVAnnotHandler**. It is called to handle key presses in the annotation. If **NULL**, it is as if the **callback** returned **false**.

Called when there is a key-down event and the annotation is selected and the active tool doesn't want the event.

Parameters

annotHandler	The handler responsible for this annotation.
anAnnot	The annotation in which the key press occurred.
key	The key that was pressed
flags	Indicates which modifier keys are pressed. Must be an OR of the **Modifier Keys** values.

Return Value

true if the callback handled the key press, **false** otherwise.

Header File

AVExpT.h

Related Callbacks

AVAnnotHandlerDoKeyDownExProc

AVAnnotHandlerDoPropertiesProc

```
ACCB1 void ACCB2 AVAnnotHandlerDoPropertiesProc
(AVAnnotHandler annotHandler, PDAnnot anAnnot, AVDoc doc);
```

Description

(Optional) Callback for **AVAnnotHandler**. It displays whatever user interface it wishes to allow a user to change an annotation's properties. Set it to **NULL** if the annotation type has no user-specified properties.

Called when the user selects the "Properties…" item from the "Edit" menu while an annotation of this type is selected. If **NULL**, the "Properties" menu item is dimmed when a corresponding object is selected.

Parameters

annotHandler	The annotation handler responsible for the annotation.
anAnnot	The annotation whose properties are set.
doc	The document containing the annotation.

Return Value

None

Header File

AVExpT.h

Related Callbacks

None

AVAnnotHandlerDrawExProc

```
ACCB1 ASBool ACCB2 AVAnnotHandlerDrawExProc
(AVAnnotHandler annotHandler,PDAnnot annot,
AVPageView pageView, AVRect* updateRect);
```

Description

Called to request that the annotation appearance be drawn.

Parameters

annotHandler	The annotation handler responsible for this annotation.
annot	The annotation.
pageView	The **AVPageView** in which the annotation is located.
updateRect	The portion of the annotation's bounding rect that should be drawn.

Return Value

true if the callback completed drawing successfully, **false** otherwise.

Header File

AVExpT.h

Related Callbacks

AVAnnotHandlerDrawProc

Related Methods

None

AVAnnotHandlerDrawProc

```
ACCB1 void ACCB2 AVAnnotHandlerDrawProc
(AVAnnotHandler annotHandler, PDAnnot anAnnot,
AVPageView pageView);
```

Description

(Optional) Callback for **AVAnnotHandler** that draws the annotation. Set it to **NULL** if the annotation handler has no **Draw** method.

If the annotation has an appearance (**AP**) key, use this information to draw the annotation. Read the annotation's appearance state (**AS**) key to determine which appearance to use. Then read the Cos stream for the appropriate appearance and display it with **AVPageViewDrawCosObj**. See the code example below.

Parameters

annotHandler	The annotation handler responsible for the annotation.
anAnnot	The annotation to draw.
pageView	The **AVPageView** containing the annotation.

Return Value

None

Header File

AVExpT.h

Related Callbacks

AVAnnotHandlerDrawExProc

Example

```
ASAtom coState;
CosObj coApp;
AVRect avr;

/* PDAnnotGetState is a plug-in defined function that returns an ASAtom
for the appearance that the /AS key points to */
coState = PDAnnotGetState(annot);
/* PDAnnotGetAppearance is a plug-in defined function that returns the
CosStream for that appearance */
coApp = PDAnnotGetAppearance(annot, FaceNormal_K, coState);
AVPageViewGetAnnotRect(pageView, annot, &avr);
AVPageViewDrawCosObj(pageView, coApp, &avr);
```

AVAnnotHandlerEnumProc

```
ACCB1 ASBool ACCB2 AVAnnotHandlerEnumProc
(AVAnnotHandler annotHandler, void* clientData);
```

Description

Callback for **AVAppEnumAnnotHandlers**. It is called once for each annotation handler currently registered with the Acrobat viewer (see **AVAppRegisterAnnotHandler**).

Parameters

annotHandler	The annotation handler.
clientData	User-supplied data that was passed in the call to **AVAppEnumAnnotHandlers**.

Return Value

true to continue enumeration, **false** to halt enumeration.

Header File

AVExpT.h

Related Methods

AVAppEnumAnnotHandlers

AVAnnotHandlerGetAnnotViewBBoxProc

```
ACCB1 void ACCB2 AVAnnotHandlerGetAnnotViewBBoxProc
(AVAnnotHandler annotHandler, AVPageView pageView,
PDAnnot anAnnot, AVRect* bbox);
```

Description

Callback for **AVAnnotHandler**. It returns the rectangle enclosing the annotation on the screen.

Parameters

annotHandler	The annotation handler responsible for the annotation.
pageView	The **AVPageView** in which the annotation is located.
anAnnot	The annotation whose bounding box is returned.
bbox	*(Filled by the callback)* The annotation's bounding rectangle.

Return Value

None

Header File

AVExpT.h

Related Callbacks

AVAnnotHandlerPtInAnnotViewBBoxProc

AVAnnotHandlerGetInfoProc

```
ACCB1 AVAnnotHandlerInfo ACCB2 AVAnnotHandlerGetInfoProc
(AVAnnotHandler avanh);
```

Description

(Optional) Callback for **AVAnnotHandler**. Gets information associated with an annotation.

To effectively use a **PDAnnotHandler** associated with an annotation, its **AVAnnotHandler** must have its **AVAnnotHandlerGetInfoProc** and **AVAnnotHandlerDeleteInfoProc** callbacks defined.

Parameters

avanh	The annotation handler responsible for this annotation.

Return Value

Information associated with the annotation.

Header File

AVExpT.h

Related Callbacks

AVAnnotHandlerDeleteInfoProc

Related Methods

AVAppRegisterAnnotHandler

AVAnnotHandlerGetLayerProc

```
ACCB1 ASFixed ACCB2 AVAnnotHandlerGetLayerProc
(AVAnnotHandler annotHandler, PDAnnot anAnnot);
```

Description

Callback for **AVAnnotHandler**. It returns the annotation's layer. The layer need not be a constant. For example, the Acrobat viewer's built-in text annotations have a different layer depending on whether they are opened or closed. This ensures that a closed text annotation never appears on top of an open text annotation.

Parameters

annotHandler	The annotation handler responsible for the annotation.
anAnnot	The annotation whose layer is returned.

Return Value

The annotation's layer.

Header File

AVExpT.h

Related Callbacks

None

AVAnnotHandlerGetTypeProc

```
ACCB1 ASAtom ACCB2 AVAnnotHandlerGetTypeProc
(AVAnnotHandler annotHandler);
```

Description

(Required) Callback for **AVAnnotHandler**. It returns an **ASAtom** indicating the annotation type for which the handler is responsible. This corresponds to the annotation's **Subtype** key in the PDF file.

This is the method that **AVAppGetAnnotHandlerByName** uses to find the correct handler.

Parameters

annotHandler	The annotation handler whose type is returned.

Return Value

The annotation type for which this handler is responsible.

Header File

AVExpT.h

Related Methods

AVAppRegisterAnnotHandler

AVAnnotHandlerNewProc

```
ACCB1 ASBool ACCB2 AVAnnotHandlerNewProc
(AVAnnotHandler annotHandler, PDAnnot anAnnot,
AVPageView pageView);
```

Description

(Unused) Callback for **AVAnnotHandler**.

Parameters

annotHandler	The annotation handler.
anAnnot	Annotation to modify.
pageView	The **AVPageView** in which the annotation is located.

Return Value

true if the new annotation handler is in a valid initial state for its subclass, **false** otherwise.

Header File

AVExpT.h

Related Callbacks

None

AVAnnotHandlerNotifyAnnotAddedToSelectionProc

```
ACCB1 void ACCB2 AVAnnotHandlerNotifyAnnotAddedToSelectionProc
(AVAnnotHandler annotHandler, PDAnnot anAnnot,
AVPageView pageView);
```

Description

(Optional) Callback for **AVAnnotHandler**. It is called when an annotation is added to the selection, and should highlight the annotation. Set it to **NULL** if omitted.

To allow only a single annotation to select at a time, keep a global variable containing the selected annotation and on each invocation of **NotifyAnnotAddedToSelection** first deselect the current selection, if any (that is, if **selectedAnnot** is non-**NULL**, call its **AVAnnotHandlerNotifyAnnotRemovedFromSelectionProc**select the new annotation, and set **selectedAnnot**. Of course, **RemovedFrom** should set **selectedAnnot** to **NULL**.

Parameters

annotHandler	The annotation handler responsible for the annotation that was added to the selection.
anAnnot	The annotation that was added to the selection.
pageView	The **AVPageVIew** containing the annotation that was added to the selection.

Return Value

None

Header File

AVExpT.h

Related Methods

AVDocSetSelection

AVAnnotHandlerNotifyAnnotRemovedFromSelectionProc

```
ACCB1 void ACCB2
AVAnnotHandlerNotifyAnnotRemovedFromSelectionProc
(AVAnnotHandler annotHandler, PDAnnot anAnnot,
AVPageView pageView);
```

Description

(Optional) Callback for **AVAnnotHandler**. It is called when an annotation is removed from the selection, and should unhighlight the annotation. Set it to **NULL** if omitted.

Parameters

annotHandler	The annotation handler responsible for the annotation that was removed from the selection.
anAnnot	The annotation that was removed from the selection.
pageView	The **AVPageView** in which the annotation appears.

Return Value

None

Header File

AVExpT.h

Related Methods

AVDocClearSelection
AVDocSetSelection

AVAnnotHandlerNotifyDestroyProc

```
ACCB1 void ACCB2 AVAnnotHandlerNotifyDestroyProc
(AVAnnotHandler annotHandler);
```

Description

Currently unused.

Parameters

annotHandler	The annotation handler.

Return Value

None

Header File

AVExpT.h

Related Callbacks

None

AVAnnotHandlerPerformOpProc

```
ACCB1 ASBool ACCB2 AVAnnotHandlerPerformOpProc
(AVAnnotHandler annotHandler, PDAnnot annot,
AVPageView pageView, AVAnnotOp annotOp, AVAnnotOpData opData);
```

Description

Called to initiate the operation.

Parameters

annotHandler	The annotation handler responsible for this annotation.
annot	The annotation.
pageView	The **AVPageView** in which the annotation is located.
annotOp	The operation to be performed.
opData	The data associated with the operation.

Return Value

true if the operation is performed; **false** otherwise.

Header File

AVExpT.h

Related Callbacks

AVAnnotHandlerCanPerformOpProc

Related Methods

None

AVAnnotHandlerPtInAnnotViewBBoxProc

```
ACCB1 ASBool ACCB2 AVAnnotHandlerPtInAnnotViewBBoxProc
(AVAnnotHandler annotHandler, AVPageView pageView,
PDAnnot anAnnot, ASInt16 xHit, ASInt16 yHit);
```

Description

Callback for **AVAnnotHandler**. It is called by **AVPageViewIsAnnotAtPoint** to determine whether or not a point is within an annotation. The annotation handler is free to determine what it means for the point to be “in” the annotation. For example, if the annotation appears only as the outline of a circle, the point may be “in” the annotation only when it is near the border of the circle, but not elsewhere within the circle.

Parameters

annotHandler	The annotation handler responsible for this annotation.
pageView	The **AVPageView** in which the annotation appears.
anAnnot	The annotation being tested.
xHit	The x-coordinate of the point to test.
yHit	The *y*-coordinate of the point to test.

Return Value

true if the point is in the annotation, **false** otherwise.

Header File

AVExpT.h

Related Methods

AVPageViewIsAnnotAtPoint

AVAuxDataPerformProc

```
ACCB1 ASBool ACCB2 AVAuxDataPerformProc (ASAtom auxDataType,
void* auxData, ASInt32 auxDataLen, AVDoc avDoc);
```

Description

(Optional) Callback for **AVAuxDataHandler**. It is called to process auxiliary data sent to the **AVDoc** using **AVDocSendAuxData**. This callback must process the data appropriately for whatever **auxDataType** is sent.

If **NULL**, default behavior is used.

Parameters

auxDataType	Specifies the type of **auxData**. This determines how **auxData** is interpreted.
auxData	The auxiliary data.
auxDataLen	The length of **auxData**, in bytes.
avDoc	The document with which the auxiliary data is associated.

Return Value

true if the data is acted upon, **false** if nothing is done.

Header File

AVExpT.h

Related Methods

AVDocSendAuxData

AVCmdHandlerInitProc

```
ACCB1 ASBool ACCB2 AVCmdHandlerInitProc (ASAtom handlerName);
```

Description

Initialize the command handler. Called once for each command handler registered.

Parameters

handlerName	The name of the command handler.

Return Value

true if initialization succeeds, **false** otherwise.

Header File

AVExpT.h

Related Callbacks

AVCmdHandlerTermProc

Related Methods

None

AVCmdHandlerTermProc

```
ACCB1 void ACCB2 AVCmdHandlerTermProc (ASAtom handlerName);
```

Description

Terminate the handler. Called once for each handler registered when Acrobat shuts down. Called before plug-ins are unloaded.

Parameters

handlerName	The name of the handler being terminated.

Return Value

None

Header File

AVExpT.h

Related Callbacks

AVCmdHandlerInitProc

Related Methods

None

AVCommandCancelProc

```
ACCB1 AVCommandStatus ACCB2 AVCommandCancelProc
(AVCommand cmd);
```

Description

Stop working and clean up as though the command executed to completion.

Parameters

cmd	The command being canceled.

Return Value

One of the **AVCommandStatus** codes.

Header File

AVExpT.h

Related Callbacks

None

Related Methods

AVCommandGetCancelProc
AVCommandCancel

AVCommandCreatedProc

```
ACCB1 void ACCB2 AVCommandCreatedProc (AVCommand cmd);
```

Description

Called after a command is created. The command handler can establish default parameters, and so forth, for the newly created command.

Parameters

cmd	The command that was created.

Return Value

None

Header File

AVExpT.h

Related Callbacks

AVCommandDestroyProc

Related Methods

None

AVCommandDestroyProc

```
ACCB1 void ACCB2 AVCommandDestroyProc (AVCommand cmd);
```

Description

Called before a command is destroyed. The command handler should free any memory allocated by the command.

Parameters

cmd	The command being destroyed.

Return Value

None

Header File

AVExpT.h

Related Callbacks

AVCommandCreatedProc

Related Methods

AVCommandDestroy

AVCommandGetProc

```
ACCB1 void ACCB2 AVCommandGetProc (AVCommand cmd, ASCab
theCab);
```

Description

Called to retrieve a cabinet from a command. Used in the **GetParams** and **GetProps** members of the **AVCommandHandlerRec** structure. When retrieving command parameters, the handler should first remove any existing items from **theCab** using **ASCabMakeEmpty** and then copy all parameter values from the command into **theCab**. When retrieving properties, the command handler should replace any entries in **theCab** with key names it recognizes with copies of the command-specific properties.

Parameters

cmd	The command whose procedure is being retrieved.
theCab	*(Filled by the callback)* The appropriate command cabinet.

Return Value

None

Header File

AVExpT.h

Related Callbacks

None

Related Methods

None

AVCommandPostflightFileProc

```
ACCB1 AVCommandStatus ACCB2 AVCommandPostflightFileProc
(AVCommand cmd, PDDoc doc);
```

Description

Every command in a sequence gets its “Postflight” command callback called after all commands in a given sequence have been executed but before the file is closed.

Preflights and Postflights are good for getting user data or preparing the command at the beginning of the sequence. For example, you could use the pre-flight to ask what password the “Add Security” command should use. This is important since you only want to ask once (not for every file), and you don’t want to store the password in the sequence file (or the command’s persistent parameters).

Here is the order that the AVCommandPre/Postflight callbacks are called:

- Sequence Begins
- **AVCommandPreflightSequenceProc**s for all commands are called
- Open File #1
- **AVCommandPreflightFileProc**s for all commands are called
- Execute all commands on given file
- **AVCommandPostflightFileProc**s for all commands are called
- Close File #1
- Open File #2
- ... (repeat pre/post file procs)
- Close last file
- **AVCommandPostflightSequenceProc**s for all commands are called.
- Sequence ends

Parameters

cmd	The command.
doc	The **PDDoc**.

Return Value

One of the **AVCommandStatus** codes.

Header File

AVExpT.h

Related Callbacks

None

Related Methods

None

AVCommandPostflightSequenceProc

```
ACCB1 AVCommandStatus ACCB2 AVCommandPostflightSequenceProc
(AVCommand cmd);
```

Description

Every command in a sequence gets its Postflight command callback called after the sequence is executed.

Preflights and Postflights are good for getting user data or preparing the command at the beginning of the sequence. For example, you could use the pre-flight to ask what password the “Add Security” command should use. This is important since you only want to ask once (not for every file), and you don’t want to store the password in the sequence file (or the command’s persistent parameters).

Here is the order that the AVCommandPre/Postflight callbacks are called:

- Sequence Begins
- **AVCommandPreflightSequenceProc**s for all commands are called
- Open File #1
- **AVCommandPreflightFileProc**s for all commands are called
- Execute all commands on given file
- **AVCommandPostflightFileProc**s for all commands are called
- Close File #1
- Open File #2
- ... (repeat pre/post file procs)
- Close last file
- **AVCommandPostflightSequenceProc**s for all commands are called.
- Sequence ends

Parameters

cmd	The command.

Return Value

One of the **AVCommandStatus** codes.

Header File

AVExpT.h

Related Callbacks

None

Related Methods

None

AVCommandPreflightFileProc

```
ACCB1 AVCommandStatus ACCB2 AVCommandPreflightFileProc
(AVCommand cmd, PDDoc doc);
```

Description

Every command in a sequence gets its “Preflight” callback called after each file has been opened to be processed but before any commands have been executed on that file. If any of the Preflight callbacks returns an error, the sequence is aborted.

Preflights and Postflights are good for getting user data or preparing the command at the beginning of the sequence. For example, you could use the pre-flight to ask what password the “Add Security” command should use. This is important since you only want to ask once (not for every file), and you don’t want to store the password in the sequence file (or the command’s persistent parameters).

- Sequence Begins
- **AVCommandPreflightSequenceProc**s for all commands are called
- Open File #1
- **AVCommandPreflightFileProc**s for all commands are called
- Execute all commands on given file
- **AVCommandPostflightFileProc**s for all commands are called
- Close File #1
- Open File #2
- ... (repeat pre/post file procs)
- Close last file
- **AVCommandPostflightSequenceProc**s for all commands are called.
- Sequence ends

Parameters

cmd	The command.
doc	The **PDDoc**.

Return Value

One of the **AVCommandStatus** codes.

Header File

AVExpT.h

Related Callbacks

None

Related Methods

None

AVCommandPreflightSequenceProc

```
ACCB1 AVCommandStatus ACCB2 AVCommandPreflightSequenceProc
(AVCommand cmd);
```

Description

Every command in a sequence gets its Preflight callback called before the sequence is executed. If any of the Preflight callbacks returns an error, the sequence is aborted.

Preflights and Postflights are good for getting user data or preparing the command at the beginning of the sequence. For example, you could use the pre-flight to ask what password the “Add Security” command should use. This is important since you only want to ask once (not for every file), and you don’t want to store the password in the sequence file (or the command’s persistent parameters).

- Sequence Begins
- **AVCommandPreflightSequenceProc** for all commands are called
- Open File #1
- **AVCommandPreflightFileProc**s for all commands are called
- Execute all commands on given file
- **AVCommandPostflightFileProc**s for all commands are called
- Close File #1
- Open File #2
- ... (repeat pre/post file procs)
- Close last file
- **AVCommandPostflightSequenceProc**s for all commands are called.
- Sequence ends

Parameters

cmd	The command.

Return Value

One of the **AVCommandStatus** codes.

Header File

AVExpT.h

Related Callbacks

None

Related Methods

None

AVCommandRegisterCommandsProc

```
ACCB1 void ACCB2 AVCommandRegisterCommandsProc
(ASAtom handlerName);
```

Description

The application maintains a global list of commands that the user can choose from when building his own command. During the initialization sequence, this method registers all the commands that the registered command handler builds and wants included in the global command list.

Parameters

handlerName	The name of the command handler being registered.

Return Value

None

Header File

AVExpT.h

Related Callbacks

None

Related Methods

None

AVCommandResetProc

```
ACCB1 AVCommandStatus ACCB2 AVCommandResetProc
(AVCommand cmd);
```

Description

Stop working, clear any errors, and try to get back into a Ready state. For many commands this is equivalent to canceling.

Parameters

cmd	The command being reset.

Return Value

One of the **AVCommandStatus** codes.

Header File

AVExpT.h

Related Callbacks

AVCommandSetProc

Related Methods

AVCommandReset

AVCommandSetProc

```
ACCB1 AVCommandStatus ACCB2 AVCommandSetProc (AVCommand cmd,
ASCab cab);
```

Description

Called to set a cabinet within a command. Used in the **SetParams** member of the **AVCommandHandlerRec** structure. The command handler should copy any information from the cabinet into the command. It must not destroy or modify the cabinet.

Parameters

cmd	The command.
cab	The cabinet to store.

Return Value

One of the **AVCommandStatus** codes.

Header File

AVExpT.h

Related Callbacks

AVCommandResetProc

Related Methods

None

AVCommandShowDialogProc

```
ACCB1 AVCommandStatus ACCB2 AVCommandShowDialogProc
(AVCommand cmd);
```

Description

Display this command's parameter setting dialog and allow the user to alter the parameters.

Parameters

cmd	The command whose parameter setting dialog is being displayed.

Return Value

One of the **AVCommandStatus** codes.

Header File

AVExpT.h

Related Callbacks

None

Related Methods

None

AVCommandWorkProc

```
ACCB1 AVCommandStatus ACCB2 AVCommandWorkProc (AVCommand cmd);
```

Description

Do some work. If you don't finish your work, return **kAVCommandWorking**. If you do finish your work, return **kAVCommandDone**. If the user cancels the operation, return **kAVCommandCanceled**. If an error occurs, return **kAVCommandInError**.

In most cases this method performs its work until it returns **kAVCommandDone**, but in some cases it may be called on to cancel or reset before its work is done.

Parameters

cmd	The command doing some work.

Return Value

One of the **AVCommandStatus** codes.

Header File

AVExpT.h

Related Callbacks

None

Related Methods

AVCommandWork

AVComputeEnabledProc

```
ACCB1 ASBool ACCB2 AVComputeEnabledProc (void* data);
```

Description

Callback that is used to determine whether or not a menu item, toolbar button, or tool is enabled. If used for a tool, it is one of the optional callbacks for **AVTool**.

It is called before the menu item or toolbar button is displayed, or before a tool is activated. If it returns **false**, the menu item, toolbar button, or tool is disabled; otherwise it is enabled. If this callback is **NULL**, the menu item, toolbar button, or tool is always enabled.

Each menu item, toolbar button, or tool can have its own **AVComputeEnabledProc**, or they can be shared.

Parameters

data	User-supplied data that was passed in the call to **AVMenuItemSetComputeEnabledProc** or **AVToolButtonSetComputeEnabledProc**.

Return Value

true if the menu item, toolbar button, or tool is enabled, **false** otherwise.

Header File

AVExpT.h

Related Methods

AVMenuItemSetComputeEnabledProc
AVToolButtonSetComputeEnabledProc

AVComputeMarkedProc

```
ACCB1 ASBool ACCB2 AVComputeMarkedProc (void* data);
```

Description

Callback that is used to determine whether or not a menu item or toolbar button is marked (a marked menu item has a check mark next to it, and a marked toolbar button appears selected). It is called before the menu item or toolbar button is displayed. If it returns **false**, the menu item of toolbar button is not marked, otherwise it is marked.

Each menu item and toolbar button can have is own **AVComputeMarkedProc**, or they can be shared.

Parameters

data	User-supplied data that was passed in the call to **AVMenuItemSetComputeMarkedProc** or **AVToolButtonSetComputeMarkedProc**.

Return Value

true if the menu item or toolbar button is marked, **false** otherwise.

Header File

AVExpT.h

Related Methods

AVMenuItemSetComputeMarkedProc
AVToolButtonSetComputeMarkedProc

AVConversionConvertFromPDFProc

```
ACCB1 AVConversionStatus ACCB2 AVConversionConvertFromPDFProc
(ASCab settings, AVConversionFlags flags, PDDoc doc,
ASPathName path, ASFileSys fileSys,
AVStatusMonitorProcs statusMonitor,
AVConversionClientData clientData);
```

Description

Called to convert a PDF file to a another file format.

Parameters

settings	An **ASCab** containing the settings for the conversion operation. Can be **NULL**. The implementation should use these settings rather than defaults since the batch framework may have provided custom settings.
flags	Indicates any non-default behavior to apply to the conversion. By default, conversions are synchronous, non-interactive, and do not display a settings dialog. The conversion framework will automatically call your settings dialog if **kAVConversionSyncPopSettingsDialog** is set—do not pop your settings dialog in your convert proc.
doc	The document that is to be converted.
path	The desired location for the output file.
fileSys	The file system from which **path** was obtained.
statusMonitor	Contains the progress monitor, cancel proc, and error reporting proc to be used by the converter. Can be **NULL**. If an error occurs during conversion, the implementation should not raise or throw an error but instead report the error using the **reportProc**, if it is available. The report proc member of the status monitor can be **NULL**, so developers should check for that condition before calling it.
clientData	The user-defined data that is provided to all **AVConversionHandler** callbacks.

Return Value

One of the **AVConversionStatus** codes.

Header File

AVExpt.h

Related Callbacks

AVConversionConvertToPDFProc

Related Methods

AVConversionConvertFromPDFWithHandler

AVConversionConvertToPDFProc

```
ACCB1 AVConversionStatus ACCB2 AVConversionConvertToPDFProc
(ASCab settings, ASPathName path, ASFileSys fileSys,
PDDoc* doc, AVStatusMonitorProcs statusMonitor,
AVConversionClientData clientData);
```

Description

Called to convert a non-PDF file to a PDF file.

Parameters

settings	An **ASCab** containing the settings for the conversion operation. Can be **NULL**. The implementation should use these settings rather than defaults since the batch framework may have provided custom settings.
path	The location of the input file.
fileSys	The file system from which **path** was obtained.
doc	The output **PDDoc**. The implementation should not clean up this **PDDoc**—Acrobat will do this.
statusMonitor	Contains the progress monitor, cancel proc, and error reporting proc to be used by the converter. Can be **NULL**. If an error occurs during conversion, the implementation should not raise or throw an error but instead report the error using the **reportProc**, if it is available.
clientData	The user-defined data that is provided to all **AVConversionHandler** callbacks.

Return Value

One of the **AVConversionStatus** codes.

Header File

AVExpt.h

Related Callbacks

AVConversionConvertFromPDFProc

Related Methods

AVConversionConvertToPDFWithHandler

AVConversionDefaultSettingsProc

```
ACCB1 ASCab ACCB2 AVConversionDefaultSettingsProc
(const char* filterDescription,
AVConversionClientData clientData);
```

Description

Called to get the default settings for the conversion operation.

It is the caller's responsibility to release the resources associated with the returned **ASCab**.

Parameters

filterDescription	A string that represents the filterDescription parameter of the **AVFileFilterRec** for the conversion handler.
clientData	The user-defined data that is provided to all **AVConversionHandler** callbacks.

Return Value

An **ASCab** containing the default settings for the conversion operation, return **NULL** to indicate none.

Header File

AVExpt.h

Related Callbacks

None

Related Methods

None

AVConversionFromPDFEnumProc

```
ACCB1 ASBool ACCB2 AVConversionFromPDFEnumProc
(AVConversionFromPDFHandler handler,
AVConversionEnumProcData data);
```

Description

Called once for each **AVConversionFromPDFHandler** registered with Acrobat, or until the callback returns **false** to halt the enumeration.

Parameters

handler	The **AVConversionFromPDFHandler**.
data	User-defined data passed to the call to **AVConversionEnumFromPDFConverters**.

Return Value

true to continue the enumeration, **false** otherwise.

Header File

AVExpt.h

Related Callbacks

AVConversionToPDFEnumProc

Related Methods

AVConversionEnumFromPDFConverters

AVConversionParamDescProc

```
ACCB1 void ACCB2 AVConversionParamDescProc
(const ASCab settings, ASCab paramDesc,
AVConversionClientData clientData);
```

Description

Called to obtain conversion parameter information.

Parameters

settings	A read-only **ASCab** containing the requested parameters.
paramDesc	*(Filled by the callback)* The parameter descriptions (**ASText** objects) stored under numeric keys starting with key "1". For example, key="1", value="Title: API Reference" (**ASText** object).
clientData	The user-defined data that is provided to all AVConversion callbacks.

Return Value

None

Header File

AVCalls.h

Related Callbacks

None

Related Methods

None

AVConversionSettingsDialogProc

```
ACCB1 ASBool ACCB2 AVConversionSettingsDialogProc
(ASCab settings, AVConversionClientData clientData);
```

Description

Called to request the handler to display its settings dialog, if it has one. An **ASCab** containing conversion settings is passed in to fill in the dialog.

The implementation should use these settings. Ensure to use this cabinet of settings rather than defaults since the batch framework may provide different settings.

If the user commits changes, the settings should be stored in the **ASCab** that was provided.

For “ConvertToPDF” handlers, two keys are present in the settings **ASCab**:

ASPathName — Path to input file.

ASFileSys — The associated file system.

For “ConvertFromPDF” handlers, three keys are present in the settings **ASCab**:

PDDoc — Input **PDDoc**.

ASPathName — Output path.

ASFileSys — The associated file system.

Parameters

settings	The **ASCab** used to populate the dialog.
clientData	The user-defined data that is provided to all AVConversion callbacks.

Return Value

true to proceed with the conversion, **false** otherwise.

Header File

AVExpt.h

Related Callbacks

None

Related Methods

None

AVConversionToPDFEnumProc

```
ACCB1 ASBool ACCB2 AVConversionToPDFEnumProc
(AVConversionToPDFHandler handler,
AVConversionEnumProcData data);
```

Description

Called once for each **AVConversionToPDFHandler** registered with Acrobat, or until the callback returns **false** to halt the enumeration.

Parameters

handler	The **AVConversionToPDFHandler**.
data	User-defined data passed to the call to **AVConversionEnumToPDFConverters**.

Return Value

true to continue the enumeration, **false** otherwise.

Header File

AVExpt.h

Related Callbacks

AVConversionFromPDFEnumProc

Related Methods

AVConversionEnumToPDFConverters

AVDocEnumProc

```
ACCB1 ASBool ACCB2 AVDocEnumProc (AVDoc doc,
void* clientData);
```

Description

Callback used by **AVAppEnumDocs**. It is called once for each open **AVDoc**.

Parameters

doc	The current document. Do not close this **AVDoc** in this callback function.
clientData	User-supplied data that was passed in the call to **AVAppEnumDocs**.

Return Value

true to continue enumeration, **false** to halt enumeration.

Header File

AVExpT.h

Related Methods

AVAppEnumDocs

AVDocPermReqProc

```
ACCB1 PDPermReqStatus ACCB2 AVDocPermReqProc (AVDoc doc,
PDPermReqObj obj, PDPermReqOpr opr);
```

Description

A callback that can be associated with an **AVDoc** when it is opened (via an **AVDocOpenParamsRec**). It can restrict the set operations allowed on the document. When **AVDocPermRequest** is called, this callback is be consulted to deny or grant the permission. If it denies permission, **AVDocPermRequest** will also deny permission. If it grants permission, the security handler for the document will be consulted to determine the result of **AVDocPermRequest**. This callback can only deny permissions allowed by the security handler; it cannot grant permissions that the security handler does not grant.

Parameters

doc	The current document.
obj	Description of target object.
opr	Description of target operation.

Return Value

The status.

Header File

AVExpT.h

Related Methods

None

AVDocSelectionAddedToSelectionProc

```
ACCB1 void* ACCB2 AVDocSelectionAddedToSelectionProc
(AVDoc doc, void* curData, void* addData, ASBool highlight);
```

Description

Callback for **AVDocSelectionServer**. Adds the specified item to the selection, highlights it, and returns the new selection containing the newly-added item.

Parameters

doc	The document containing the data to add to the selection.
curData	Data representing the current selection. Its format is specific to the selection server.
addData	Item to add to the selection.
highlight	**true** if the selection should be highlighted (because it has not already been highlighted), **false** if the selection should not be highlighted (because it has already been highlighted by whoever called this callback). See **AVDocSetSelection** for additional information on highlighting.

Return Value

New selection data containing all current selections (that is, the previous selection plus the newly-added selection), or **NULL** if failure. If the selection server allows only a single item to be selected at a time, clear the previous selection, highlight the selection specified by **addData** (if **highlight** is **true**), and simply return **addData**.

Header File

AVExpT.h

Related Callbacks

AVDocSelectionRemovedFromSelectionProc

AVDocSelectionCanCopyProc

```
ACCB1 ASBool ACCB2 AVDocSelectionCanCopyProc (AVDoc doc,
void* selData);
```

Description

Callback for **AVDocSelectionServer**. It is used to determine whether or not the current selection can be copied. This controls, for example, whether or not the **Copy** menu item is enabled.

The **Copy** menu item is only enabled if the selection server's **AVDocSelectionCanCopyProc** returns **true** and the selection server has an **AVDocSelectionCopyProc**.

Parameters

doc	The document containing the selection.
selData	The current selection data.

Return Value

true if the current selection can be copied, **false** otherwise.

Header File

AVExpT.h

Related Callbacks

AVDocSelectionCopyProc

Related Methods

AVDocCopySelection

AVDocSelectionCanCutProc

```
ACCB1 ASBool ACCB2 AVDocSelectionCanCutProc (AVDoc doc,
void* data);
```

Description

Callback for **AVDocSelectionServer**. It is used to determine whether or not the current selection can be cut. This controls, for example, whether or not the **Cut** menu item is enabled.

The **Cut** menu item is only enabled if the selection server's **AVDocSelectionCanCutProc** returns **true** and the selection server has an **AVDocSelectionCutProc**.

Parameters

doc	The document containing the current selection.
data	The current selection data.

Return Value

true if the current selection can be cut, **false** otherwise.

Header File

AVExpT.h

Related Callbacks

AVDocSelectionCutProc
AVDocSelectionCanPasteProc

AVDocSelectionCanDeleteProc

```
ACCB1 ASBool ACCB2 AVDocSelectionCanDeleteProc (AVDoc doc,
void* selData);
```

Description

Callback for **AVDocSelectionServer**. It is used to determine whether or not the current selection can be deleted. This controls, for example, whether or not the **Delete** menu item is enabled.

The **Delete** menu item is only enabled if the selection server's **AVDocSelectionCanDeleteProc** returns **true** and the selection server has an **AVDocSelectionDeleteProc**.

Parameters

doc	The document containing the current selection.
selData	The current selection data.

Return Value

true if the current selection can be deleted, **false** otherwise.

Header File

AVExpT.h

Related Callbacks

AVDocSelectionCanDeleteProc

Related Methods

AVDocDeleteSelection

AVDocSelectionCanPasteProc

```
ACCB1 ASBool ACCB2 AVDocSelectionCanPasteProc (AVDoc doc);
```

Description

Callback for **AVDocSelectionServer**. It is used to determine whether or not the current selection can be pasted. This controls, for example, whether or not the **Paste** menu item is enabled.

The **Paste** menu item is only enabled if the selection server's **AVDocSelectionCanPasteProc** returns **true** and the selection server has an **AVDocSelectionPasteProc**.

Parameters

doc	The document into which the selection is pasted.

Return Value

true if the data currently on the clipboard can be pasted, **false** otherwise.

Header File

AVExpT.h

Related Callbacks

AVDocSelectionPasteProc
AVDocSelectionCanCutProc

AVDocSelectionCanPropertiesProc

```
ACCB1 ASBool ACCB2 AVDocSelectionCanPropertiesProc (AVDoc doc,
void* selData);
```

Description

Callback for **AVDocSelectionServer**. It is used to determine whether or not the current selection has user-specified properties. This controls whether or not the "**Properties**…" menu item is enabled.

The "**Properties**…" menu item will not be enabled if the selection server does not have a **AVDocSelectionPropertiesProc** callback.

Parameters

doc	The document containing the current selection.
selData	The current selection data.

Return Value

true if the current selection has a Properties UI, **false** otherwise.

Header File

AVExpT.h

Related Methods

AVDocDoSaveAsWithParams

AVDocSelectionCanSelectAllProc

```
ACCB1 ASBool ACCB2 AVDocSelectionCanSelectAllProc (AVDoc doc,
void* selData);
```

Description

Callback for **AVDocSelectionServer**. It is used to determine whether or not the current selection type can perform a “select all” operation. This controls whether or not the **Select All** menu item is enabled.

Parameters

doc	The document containing the current selection.
selData	The current selection’s data.

Return Value

true if “select all” can be performed on the current selection type, **false** otherwise.

Header File

AVExpT.h

Related Callbacks

AVDocSelectionSelectAllProc

AVDocSelectionCopyProc

```
ACCB1 ASBool ACCB2 AVDocSelectionCopyProc (AVDoc doc,
void* selData);
```

Description

Callback for **AVDocSelectionServer**. It copies the selected item to the clipboard. The Acrobat viewer will have already cleared the clipboard and placed some private data onto it so that it can identify the selection server that put data onto the clipboard. Because of this, a plug-in must not clear the clipboard, but only add its private data. In addition, if the current selection can reasonably be represented as text, plug-ins are strongly encouraged to place a text representation of the selection onto the clipboard, in addition to their own private format.

Parameters

doc	The document whose selection is copied.
selData	The current selection data in **doc**.

Return Value

true if the data was actually copied, **false** otherwise.

Header File

AVExpT.h

Related Methods

AVDocCopySelection
UnixAppClipboardGetItemId

AVDocSelectionCutProc

```
ACCB1 ASBool ACCB2 AVDocSelectionCutProc (AVDoc doc,
void* data);
```

Description

Callback for **AVDocSelectionServer**. Cuts the current selection. See the discussion under **AVDocSelectionCopyProc** for information on how the selection server must use the clipboard.

Parameters

doc	Document whose selection is cut.
data	The current selection data in **doc**.

Return Value

true if the data was actually cut, **false** otherwise.

Header File

AVExpT.h

Related Methods

UnixAppClipboardGetItemId

AVDocSelectionDeleteProc

```
ACCB1 ASBool ACCB2 AVDocSelectionDeleteProc (AVDoc doc,
void* selData);
```

Description

Callback for **AVDocSelectionServer**. Deletes the current selection.

Parameters

doc	Document whose selection is deleted.
selData	The current selection in **doc**.

Return Value

true if the data was actually deleted, **false** otherwise.

Header File

AVExpT.h

Related Methods

AVDocDeleteSelection

AVDocSelectionEnumPageRangesProc

```
ACCB1 void ACCB2 AVDocSelectionEnumPageRangesProc (AVDoc doc,
void* selectionData, AVSelectionPageRangeEnumProc enumProc,
void* clientData);
```

Description

Callback for **AVDocSelectionServer**. It allows enumeration of the set of pages the selection covers.

Parameters

doc	The document containing the selection.
selectionData	The current selection data. Its content and organization is up to the selection server for the current selection type.
enumProc	The current selection data. Its content and organization is up to the selection server for the current selection type.
clientData	User-supplied data that was passed in the call to **AVDocSelectionEnumPageRanges**.

Return Value

None

Header File

AVExpT.h

Related Callbacks

AVDocSelectionEnumSelectionProc

AVDocSelectionEnumSelectionProc

```
ACCB1 void ACCB2 AVDocSelectionEnumSelectionProc (AVDoc doc,
void* data, AVSelectionEnumProc proc, void* clientData);
```

Description

(Optional) Callback for **AVDocSelectionServer**. Called by **AVDocEnumSelection**. This callback enumerates the current selection, calling the specified **AVSelectionEnumProc** for each “item” in the selection (the selection server is free to decide what constitutes an item).

If omitted, the selection is enumerated by calling **proc** once, passing the entire selection to it.

Parameters

doc	The document whose selection is enumerated.
data	The current selection in **doc**.
proc	The procedure to call for each item in the selection. This callback must halt enumeration if **proc** returns **false**, and continue enumeration if **proc** returns **true**.
clientData	User-supplied data that was passed in the call to **AVDocEnumSelection**. Pass this as the **clientData** each time **proc** is called.

Return Value

None

Header File

AVExpT.h

Related Callbacks

AVDocSelectionEnumPageRangesProc

Related Methods

AVDocEnumSelection

AVDocSelectionGetAVRectProc

```
ACCB1 ASBool ACCB2 AVDocSelectionGetAVRectProc(AVDoc doc,
ASInt32 pageNo, AVRect* rect, void* selData);
```

Description

Called to identify the bounding rectangle of a selection. Used by the Info palette to display the width and height of the selection.

Rectangle coordinates are in device space.

Parameters

doc	The document containing the selection.
pageNo	The number of the page containing the bounding rectangle.
rect	*(Filled by the callback)* The bounding rect of the selection.
selData	Server-dependent selection data.

Return Value

true if the bounding rect was successfully determined, **false** otherwise.

Header File

AVExpT.h

Related Callbacks

None

Related Methods

None

AVDocSelectionGetSelectionTypeProc

```
ACCB1 ASAtom ACCB2 AVDocSelectionGetSelectionTypeProc
(AVDoc doc, void* data);
```

Description

Callback for **AVDocSelectionServer**. It provides a way for a single selection server to register different selection types based on the selection data. If this callback is not supplied, the selection type defaults to the return value from **AVDocSelectionGetTypeProc**.

This callback does not affect existing selection servers.

Parameters

doc	The document containing the selection.
data	The current selection data. Its content and organization is up to the selection server for the current selection type.

Return Value

None

Header File

AVExpT.h

Related Callbacks

AVDocSelectionGetTypeProc

AVDocSelectionGettingSelectionProc

```
ACCB1 void ACCB2 AVDocSelectionGettingSelectionProc
(AVDoc doc, void* selData, ASBool highlight);
```

Description

Callback for **AVDocSelectionServer**. It is called when the selection is set (for example, via **AVDocSetSelection**).

Along with whatever else this callback chooses to do, it must highlight the specified selection (if requested), using the selection server's **AVDocSelectionHighlightSelectionProc** callback.

Parameters

doc	The document containing the selection.
selData	The selection data being added.
highlight	If **true**, highlight the selection, **false** otherwise.

Return Value

None

Header File

AVExpT.h

Related Methods

AVDocSetSelection

AVDocSelectionGetTypeProc

```
ACCB1 ASAtom ACCB2 AVDocSelectionGetTypeProc (void);
```

Description

Callback for **AVDocSelectionServer**. Returns the selection type this server handles (for example, “Text” or “Bookmark”). This information is used so that the Acrobat viewer knows which selection server to call.

Parameters

None

Return Value

The selection type this selection server handles.

Header File

AVExpT.h

Related Methods

AVDocGetSelectionServerByType

AVDocSelectionHighlightSelectionProc

```
ACCB1 void ACCB2 AVDocSelectionHighlightSelectionProc
(AVDoc doc, void* data);
```

Description

(Previously known as **AVDocHighlightSelectionProc**) Callback for **AVDocSelectionServer**. It highlights the selection. This method is unnecessary if the selection type highlights itself as, for example, annotations do.

Parameters

doc	The document containing the selection.
data	The current selection data. Its content and organization is up to the selection server for the current selection type.

Return Value

None

Header File

AVExpT.h

Related Callbacks

AVDocSelectionGettingSelectionProc
AVDocSelectionLosingSelectionProc

AVDocSelectionKeyDownProc

```
ACCB1 ASBool ACCB2 AVDocSelectionKeyDownProc (AVDoc doc,
void* data, ASUns16 key, ASInt16 flags);
```

Description

(Optional) Callback for **AVDocSelectionServer**. Handles a key press. Needed only if the selection server processes key presses.

Parameters

doc	The document in which the click occurred.
data	The current selection data for **doc**.
key	The key that was pressed.
flags	Modifier keys that were pressed with key. Must be an OR of the **Modifier Keys** values.

Return Value

true if it the keypress was handled, **false** if it was not and therefore needs to be passed to the next procedure in the key handling chain.

Header File

AVExpT.h

Related Callbacks

None

AVDocSelectionLosingSelectionProc

```
ACCB1 void ACCB2 AVDocSelectionLosingSelectionProc (AVDoc doc,
void* selData, ASBool highlight);
```

Description

Callback for **AVDocSelectionServer**. This method is called by (among others) **AVDocClearSelection**, to let the selection server responsible for the old selection do whatever cleanup it needs.

Along with whatever else this callback chooses to do, it must de-highlight the specified selection (if requested), using the selection server's **AVDocSelectionHighlightSelectionProc** callback.

Parameters

doc	The document whose selection is being cleared.
selData	The current selection data.
highlight	If **true**, the selection specified by **selData** should be de-highlighted, **false** otherwise.

Return Value

None

Header File

AVExpT.h

Related Methods

AVDocClearSelection

AVDocSelectionPasteProc

```
ACCB1 void ACCB2 AVDocSelectionPasteProc (AVDoc doc);
```

Description

Callback for **AVDocSelectionServer**. Pastes the current selection from the clipboard.

Parameters

doc	Document into whose selection the clipboard is pasted.

Return Value

None

Header File

AVExpT.h

Related Callbacks

AVDocSelectionCutProc
AVDocSelectionCanPasteProc

AVDocSelectionPropertiesProc

```
ACCB1 void ACCB2 AVDocSelectionPropertiesProc (AVDoc doc,
void* selData);
```

Description

(Optional) Callback for **AVDocSelectionServer**. Displays the “set properties” user interface, if any, for the selection server and lets the user set the server’s properties. This callback is not needed unless the selection server has properties that can be set by the user (for example, text highlight color). This callback is called by **AVDocDoSaveAsWithParams**.

Parameters

doc	The document in which the selection server’s properties are set.
selData	The current selection data.

Return Value

None

Header File

AVExpT.h

Related Methods

AVDocDoSaveAsWithParams

AVDocSelectionRemovedFromSelectionProc

```
ACCB1 void* ACCB2 AVDocSelectionRemovedFromSelectionProc
(AVDoc doc, void* curData, void* remData, ASBool highlight);
```

Description

Callback for **AVDocSelectionServer**. De-highlights the old item given in **remData**, and returns a new **curData** or **NULL** if failure.

Parameters

doc	The document in which an item is removed from the selection.
curData	The current selection data.
remData	The item to remove from the selection. The content and format of **selData** differs for each selection server, and is up to the selection server's implementors.
highlight	If **true**, the item removed should be de-highlighted. If **false**, it should not.

Return Value

The new selection data (after the specified item has been removed).

Header File

AVExpT.h

Related Callbacks

AVDocSelectionAddedToSelectionProc

AVDocSelectionSelectAllProc

```
ACCB1 void* ACCB2 AVDocSelectionSelectAllProc (AVDoc doc,
void* selData);
```

Description

Callback for **AVDocSelectionServer**. Selects all items of the current type.

Parameters

doc	The document in which the “Select All” is performed.
selData	The current selection data in **doc**.

Return Value

The new selection data, after all items of the specified type have been selected.

Header File

AVExpT.h

Related Callbacks

AVDocSelectionCanSelectAllProc

AVDocSelectionShowMenuProc

```
ACCB1 ASBool ACCB2 AVDocSelectionShowMenuProc (AVDoc doc,
void* selData, ASInt16 x, ASInt16 y);
```

Description

Called to request that the selection server display a context menu appropriate for the current selection.

The given coordinates provide a suggested location for displaying the menu and are in device space for the current **AVPageView**.

Parameters

doc	The document containing the selection.
selData	Server-dependent selection data.
x	The x-coordinate of the point specifying the upper left corner of the menu.
y	The y-coordinate of the point specifying the upper left corner of the menu.

Return Value

true if the server showed the menu successfully, **false** otherwise.

Header File

AVExpT.h

Related Callbacks

None

Related Methods

None

AVDocSelectionShowSelectionProc

```
ACCB1 void ACCB2 AVDocSelectionShowSelectionProc (AVDoc doc,
void* data);
```

Description

Callback for **AVDocSelectionServer**. Changes the view (for example, by scrolling the current page or moving to the appropriate page) so that the current selection is visible.

Parameters

doc	The document whose selection is displayed.
data	The current selection data in **doc**.

Return Value

None

Header File

AVExpT.h

Related Methods

AVDocShowSelection

AVExecuteProc

```
ACCB1 void ACCB2 AVExecuteProc (void* data);
```

Description

Callback that is called whenever a menu item or toolbar button is executed. It implements whatever the menu item or toolbar button does (for example, opening a file or initiating a search).

This method may also be called from an external application displaying a PDF file in its window, using the **ExternalDocServerCreationData** structure.

Parameters

data	User-supplied data that was passed when **AVMenuItemSetExecuteProc** or **AVToolButtonSetExecuteProc** were called.

Return Value

None

Header File

AVExpT.h

Related Methods

AVMenuItemSetExecuteProc
AVToolButtonSetExecuteProc

AVIdleProc

```
ACCB1 void ACCB2 AVIdleProc (void* clientData);
```

Description

Callback that is called periodically when the Acrobat viewer is otherwise idle.

Parameters

clientData	User-supplied data that was passed in the call to **AVAppRegisterIdleProc**.

Return Value

None

Header File

AVExpT.h

Related Methods

AVAppRegisterIdleProc
AVAppUnregisterIdleProc

AVMenuPredicate

```
ACCB1 ASBool ACCB2 AVMenuPredicate (AVMenu menu,
void* clientData);
```

Description

Callback that is called for each menu enumerated by **AVMenubarAcquireMenuByPredicate**. The first menu for which this callback returns **true** is acquired.

Parameters

menu	The current menu in the enumeration.
clientData	User-supplied data that was passed in the call to **AVMenubarAcquireMenuByPredicate**.

Return Value

true to acquire the current menu and halt enumeration, **false** to continue enumeration.

Header File

AVExpT.h

Related Methods

AVMenubarAcquireMenuByPredicate

AVMenuItemPredicate

```
ACCB1 ASBool ACCB2 AVMenuItemPredicate (AVMenuItem menuItem,
void* clientData);
```

Description

Callback that is called for each menu item enumerated by **AVMenubarAcquireMenuItemByPredicate**. The first menu item for which this callback returns **true** is acquired.

Parameters

menuItem	The current menu item in the enumeration.
clientData	User-supplied data that was passed in the call to **AVMenubarAcquireMenuItemByPredicate**.

Return Value

true to acquire the current menu item and halt enumeration, **false** to continue enumeration.

Header File

AVExpT.h

Related Methods

AVMenubarAcquireMenuItemByPredicate

AVOpenSaveDialogSettingsComputeEnabledProc

```
ACCB1 ASBool ACCB2 AVOpenSaveDialogSettingsComputeEnabledProc
(AVFileFilterRec* currentFilter, void* data);
```

Description

A client can provides this optional callback if it wishes to control whether the settings button in the open or save dialog is enabled or disabled. If a user does not provide this callback function, then the state of the settings button, enabled or disabled, will be determined by whether the conversion handler has a settings proc or not. See below for an example of a **ConvertToPDFComputeEnabledProc**:

Parameters

currentFilter	The currently selected filter in the dialog.
data	**void*** of **clientData**, which is the last member of the **AVOpenSaveDialogParamsRec** structure.

Return Value

true if the Settings button should be enabled; **false** otherwise.

Header File

AVExpT.h

Related Methods

AVOpenSaveDialogSettingsExecuteProc

Example

```
typedef struct _t_FindConverterData
{
     AVFileFilterRec *filter;
     ASBool match;
} FindConverterData;

static ACCB1 ASBool ACCB2 EnumToPDFConverters(AVConversionToPDFHandler
handler, AVConversionEnumProcData data)
{
     FindConverterData * findData =
      reinterpret_cast<FindConverterData*>(data);
     if (findData->filter == &handler->convFilter)
     {
       findData->match = true;
       return false;
     }
     else
       return true;
 }

ACCB1 void ACCB2 ConvertToPDFComputeEnabledProc(AVFileFilterRec
*currentFilter, void *data)
{
     FindConverterData findData;
     findData.filter = currentFilter;
     findData.match = false;
     AVConversionEnumToPDFConverters(EnumToPDFConverters,
       reinterpret_cast<AVConversionEnumProcData>(&findData));
     if (findData.match)
     {
     AVConversionToPDFHandler handler =
      reinterpret_cast<AVConversionToPDFHandler>(currentFilter);
     if (handler && handler->settingsDialog)
      return true; // If we found a match and the conversion handler has
a settings dialog, enable the button
     else
      return false; // If we found a match but the conversion handler
does not have a settings dialog, disable the button
     }
      return false;   // If this is not a conversion handler, disable
the settings button
}
```

AVOpenSaveDialogSettingsExecuteProc

```
ACCB1 ASBool ACCB2 AVOpenSaveDialogSettingsExecuteProc
(AVFileFilterRec* currentFilter, void* data);
```

Description

A client provides this optional callback to decide what action is taken when the user clicks on the settings button. The function is called back with the currently selected filter. See below for an example of a **ConvertToPDFSettingsExecuteProc**.

Parameters

currentFilter	The currently selected filter in the dialog.
data	**void*** of **clientData**, which is the last member of the **AVOpenSaveDialogParamsRec** structure.

Return Value

Boolean

Header File

AVExpT.h

Related Methods

AVOpenSaveDialogSettingsComputeEnabledProc

Example

```
ACCB1 void ACCB2 ConvertToPDFSettingsExecuteProc(AVFileFilterRec
*currentFilter, void *data)
{
     FindConverterData findData;
     findData.filter = currentFilter;
     findData.match = false;
     AVConversionEnumToPDFConverters(EnumToPDFConverters,
         reinterpret_cast<AVConversionEnumProcData>(&findData));
     if (findData.match)
     {
     AVConversionToPDFHandler handler =
      reinterpret_cast<AVConversionToPDFHandler>(currentFilter);
     if (handler && handler->settingsDialog)
     handler->settingsDialog(AVConversionToPDFGetSetting handler->
      settingsDialog(AVConversionToPDFGetSettings(handler), handler->
      clientData);
     }
}
```

AVPageViewClickProc

```
ACCB1 ASBool ACCB2 AVPageViewClickProc (AVPageView pageView,
ASInt16 x, ASInt16 y, ASInt16 flags, ASInt16 clickNo,
void* data);
```

Description

User-supplied callback that is called whenever there is a mouse click in its **AVPageView**. This callback is registered using **AVAppRegisterForPageViewClicks**.

Parameters

pageView	The **AVPageView** in which the click occurred.
x	The click's x-coordinate.
y	The click's y-coordinate.
flags	Modifier keys that are held down while the mouse was clicked. They must be an OR of the **Modifier Keys** value.
clickNo	1 if single click, 2 if double-click, 3 if triple-click.
data	User-supplied data that was passed in the call to **AVAppRegisterForPageViewClicks**.

Return Value

true if the callback handled the mouse click, **false** if it does not and the click should be passed on to the next click handler.

Header File

AVExpT.h

Related Methods

AVAppRegisterForPageViewClicks
AVAppUnregisterForPageViewClicks

AVPageViewCursorProc

```
ACCB1 ASBool ACCB2 AVPageViewCursorProc (AVPageView pageView,
ASInt16 x, ASInt16 y, void* data);
```

Description

User-supplied callback that is called whenever the cursor's shape is adjusted. This callback is registered using **AVAppRegisterForPageViewAdjustCursor**.

Parameters

pageView	The **AVPageView** in which the cursor is located.
x	The cursor's x-coordinate.
y	The cursor's y-coordinate.
data	User-supplied data that was passed in the call to **AVAppRegisterForPageViewAdjustCursor**.

Return Value

true if the callback handled the cursor shape, **false** if it does not and the cursor handler should be allowed to.

Header File

AVExpT.h

Related Methods

AVAppRegisterForPageViewAdjustCursor
AVAppUnregisterForPageViewAdjustCursor

AVPageViewDrawProc

```
ACCB1 void ACCB2 AVPageViewDrawProc (AVPageView pageView,
AVRect* updateRect, void* data);
```

Description

User-supplied callback that is called whenever the **AVPageView** is drawn. This callback is registered using **AVAppRegisterForPageViewDrawing**.

Parameters

pageView	The **AVPageView** to redraw.
updateRect	The rectangle enclosing the region to redraw.
data	User-supplied data that was passed in the call to **AVAppRegisterForPageViewDrawing**.

Return Value

None

Header File

AVExpT.h

Related Methods

AVAppRegisterForPageViewDrawing
AVAppUnregisterForPageViewDrawing

AVPageViewKeyDownProc

```
ACCB1 ASBool ACCB2 AVPageViewKeyDownProc (AVPageView pageView,
ASUns16 keyCode, ASInt16 flags, void* data);
```

Description

Called whenever there is a key down in its **AVPageView**. This callback is registered using **AVAppRegisterForPageViewKeyDown**.

Parameters

pageView	The **AVPageView** in which the keystroke occurred.
keyCode	An ASCII code representing the key that was pressed.
flags	Modifier keys that are held down while the key was pressed. They must be an OR of the **Modifier Keys** value.
data	User-supplied data that was passed in the call to **AVAppRegisterForPageViewKeyDown**.

Return Value

false to process the keydown event, **true** otherwise.

Header File

AVExpT.h

Related Methods

AVAppRegisterForPageViewKeyDown
AVAppUnregisterForPageViewKeyDown

AVRegisterCommandsProc

```
ACCB1 void ACCB2 AVRegisterCommandsProc (ASAtom handlerName);
```

Description

Callback for **AVCommandHandlerRec**. The application maintains a global list of commands that the user can choose from when building a batch sequence. During the initialization sequence, all registered command handlers are asked to build and register all the commands that the handler wants included in the global command list. This is done by calling the command handler's **RegisterCommands** callback, if it's not **NULL**.

Parameters

handlerName	The name of the command handler.

Return Value

None

Header File

AVExpT.h

Related Methods

None

AVSelectionEnumProc

```
ACCB1 ASBool ACCB2 AVSelectionEnumProc (AVDoc doc,
void* clientData, void* aSelectedObject);
```

Description

User-supplied callback that is passed in the call to **AVDocEnumSelection**. It is called once for each “item” in the selection.

AVDocEnumSelection calls the **AVDocSelectionEnumSelectionProc** for the current selection’s server to actually enumerate the selection.

Parameters

doc	The document whose selection is being enumerated.
clientData	User-supplied data that was passed in the call to **AVDocEnumSelection**.
aSelectedObject	The selected “item” currently being enumerated. The format of the data is up to the selection server. See **Selection Types** for a list of the data formats for the Acrobat viewer’s built-in selection servers.

Return Value

true to continue enumeration, **false** to halt enumeration.

Header File

AVExpT.h

Related Methods

AVDocEnumSelection

AVSelectionPageRangeEnumProc

```
ACCB1 ASBool ACCB2 AVSelectionPageRangeEnumProc (AVDoc doc,
void* clientData, ASInt32 firstPage, ASInt32 lastPage);
```

Description

User-supplied callback that is passed in the call to **AVDocSelectionEnumPageRanges**. It is called once for each page in the selection, and consecutive pages are grouped into a single page range.

Parameters

doc	The document whose selection is being enumerated.
clientData	User-supplied data that was passed in the call to **AVDocSelectionEnumPageRanges**.
firstPage	The first page in a consecutive range of pages with a selection.
lastPage	The first page in a consecutive range of pages with a selection.

Return Value

true to continue enumeration, **false** to halt enumeration.

Header File

AVExpT.h

Related Methods

AVDocEnumSelection
AVDocSelectionEnumPageRanges

AVSetCursorProc

```
ACCB1 void ACCB2 AVSetCursorProc (CursHandle curs,
void* clientData);
```

Description

(Macintosh only) Callback in **ExternalDocWindowData** for opening PDF files in external windows. Called for a mouse-related event, such as mouse down or mouse movement.

Parameters

curs	Handle to cursor. It is a **CursHandle**.
clientData	User-supplied data that was passed in **ExternalDocWindowData**.

Return Value

None

Header File

AVExpT.h

Related Methods

AVDocOpenFromASFileWithParams
AVDocOpenFromFileWithParams
AVDocOpenFromPDDocWithParams

AVSetFocusProc

```
ACCB1 void ACCB2 AVSetFocusProc (void* clientData);
```

Description

Callback in **ExternalDocServerCreationData** to return focus to the browser displaying the document.

Parameters

clientData	User-supplied data.

Return Value

None

Header File

AVExpT.h

Related Methods

None

AVSetMessageProc

```
ACCB1 void ACCB2 AVSetMessageProc (char* msg,
void* clientData);
```

Description

(Unused) Callback in **ExternalDocServerCreationData** for opening PDF files in external windows.

Parameters

doc	Message for external application.
clientData	User-supplied data that was passed in the call to **AVSetMessageProc**.

Return Value

None

Header File

AVExpT.h

Related Methods

AVDocOpenFromASFileWithParams
AVDocOpenFromFileWithParams
AVDocOpenFromPDDocWithParams

AVSystemFontEnumProc

```
ACCB1 ASBool ACCB2 AVSystemFontEnumProc
(AVSystemFont systemFont, void* clientData);
```

Description

(*Macintosh only*). Callback for **AVAppEnumSystemFonts**. It is called once for each system font.

Parameters

systemFont	The **AVSystemFont** currently being enumerated.
clientData	User-supplied data that was passed in the call to **AVAppEnumSystemFonts**.

Return Value

true to continue enumeration, **false** to halt enumeration.

Header File

AVExpT.h

Related Methods

AVAppEnumSystemFonts

AVTextCopyProc

```
ACCB1 void ACCB2 AVTextCopyProc (ASAtom format, void* buf,
ASInt32 bufLen, void* clientData);
```

Description

Callback for **AVDocGetPageText**. Text is passed to it in the specified format.

Parameters

format	Text format. See the description of the **format** parameter of **AVDocGetPageText** for a list of the allowed types.
buf	The text.
bufLen	Length of **buf**, in bytes.
clientData	User-supplied data that was passed in the call to **AVDocGetPageText**.

Return Value

None

Header File

AVExpT.h

Related Methods

AVDocGetPageText

AVToolButtonEnumProc

```
ACCB1 ASBool ACCB2 AVToolButtonEnumProc (AVToolButton button,
void* clientData);
```

Description

Callback for **AVToolBarEnumButtons**. It is called once for each toolbar button.

Parameters

button	The toolbar button currently being enumerated.
clientData	User-supplied data that was passed in the call to **AVToolBarEnumButtons**.

Return Value

true to continue enumeration, **false** to halt enumeration.

Header File

AVExpT.h

Related Methods

AVToolBarEnumButtons

AVToolEnumProc

```
ACCB1 ASBool ACCB2 AVToolEnumProc (AVTool tool,
void* clientData);
```

Description

Callback for **AVAppEnumTools**. It is called once for each tool.

Parameters

tool	The tool currently being enumerated.
clientData	User-supplied data that was passed in the call to **AVAppEnumTools**.

Return Value

true to continue enumeration, **false** to halt enumeration.

Header File

AVExpT.h

Related Methods

AVAppEnumTools

AVTransHandlerCompleteTransDictProc

```
ACCB1 void ACCB2 AVTransHandlerCompleteTransDictProc
(AVTransHandler avth, const char* uiName, CosObj transDict);
```

Description

Callback for **AVTransHandler**. This method is called after the user has selected a distinct transition. The transition handler must fill in any dictionary items necessary to create the effect specified by the **uiName** passed in. For example, if the "Wipe" transition handler is passed an **uiName** of "Wipe Left," it would set the **Dir** key in **transDict** to the value 180.

AVTransHandlerCompleteTransDictProc should fill in standard information like direction, dimension, motion, and so forth—information gathered entirely from the UI name. Other specific information should be filled in by **AVTransHandlerDoPropertiesProc**.

Parameters

avth	The transition handler.
uiName	User interface name of the transition.
transDict	Transition dictionary to set.

Return Value

None

Header File

AVExpT.h

Related Callbacks

AVTransHandlerDoPropertiesProc

AVTransHandlerDoPropertiesProc

```
ACCB1 void ACCB2 AVTransHandlerDoPropertiesProc
(AVTransHandler avth, const char* uiName, PDTrans trans);
```

Description

Callback for **AVTransHandler**. This method is called when the user clicks the button in the transition settings dialog. This allows the transition to bring up its own custom dialog allowing the user to further specify the desired transition effect.

Once the user selects a transition effect from the popup menu, the viewer immediately creates a transition (using **PDTransNewFromCosDoc** or **PDTransNew**) and calls **AVTransHandlerInitTransDictProc** and **AVTransHandlerCompleteTransDictProc**. If the handler provides both an **AVTransHandlerDoPropertiesProc** and **AVTransHandlerGetButtonTextProc** callback, the dialog box displays a button. When the user clicks on the button, the viewer calls the handler's **AVTransHandlerDoPropertiesProc** callback. **DoProperties** is responsible for making any needed alterations to the transition; **InitTransDict** and **CompleteTransDict** are not called after **DoProperties**.

After the user clicks **OK** in the dialog box, **trans** is filled in using the supplied data.

Parameters

avth	The transition handler.
uiName	The user interface name for the transition handled by **avth**.
trans	The **PDTrans** to initialize.

Return Value

None

Header File

AVExpT.h

Related Callbacks

AVTransHandlerCompleteTransDictProc
AVTransHandlerInitTransDictProc

AVTransHandlerEnumProc

```
ACCB1 ASBool ACCB2 AVTransHandlerEnumProc
(AVTransHandler avth, void* clientData);
```

Description

Callback for **AVAppEnumTransHandlers**. It is called once for each transition handler.

Parameters

avth	The transition handler.
clientData	User-supplied data that was passed in the call to **AVAppEnumTransHandlers**.

Return Value

true to continue enumeration, **false** to halt enumeration.

Header File

AVExpT.h

Related Methods

AVAppEnumTransHandlers

AVTransHandlerExecuteProc

```
ACCB1 void ACCB2 AVTransHandlerExecuteProc
(AVTransHandler avth, PDTrans trans, AVTransitionPort srcTP,
AVTransitionPort dstTP, ASFixed duration);
```

Description

Callback for **AVTransHandler**. Executes the specified transition. The transition handler is responsible for copying the pixels specified by **srcTP** to the location specified by **dstTP**. In the process the handler can create any visual effect it desires, as long as the source pixels are eventually copied over the destination pixels in the end.

The handler should do its best to execute the visual effect in the number of seconds specified by **duration**.

The implementation will ensure that the source and destination rectangles are the same size, though their corners may not coincide.

Parameters

avth	The transition handler.
trans	The transition to execute.
srcTP	Source transition port.
dstTP	Destination transition port.
duration	Duration of the transition, in seconds.

Return Value

None

Header File

AVExpT.h

Related Callbacks

None

AVTransHandlerGetButtonTextProc

```
ACCB1 ASInt32 ACCB2 AVTransHandlerGetButtonTextProc
(AVTransHandler avth, char* buffer, ASInt32 bufLen);
```

Description

Callback for **AVTransHandler**. Gets a localized string that appears in the button on the transition settings dialog box. If **AVTransHandlerGetButtonTextProc** is **NULL** or the string it returns is empty, no button will appear.

Parameters

avth	The transition handler.
buffer	*(Filled by the callback)* The button text.
bufLen	Length of **buffer**, in bytes.

Return Value

The number of characters copied into **buffer**.

Header File

AVExpT.h

Related Callbacks

AVTransHandlerDoPropertiesProc

AVTransHandlerGetInstructionsProc

```
ACCB1 ASInt32 ACCB2 AVTransHandlerGetInstructionsProc
(AVTransHandler avth, char* buffer, ASInt32 bufLen);
```

Description

(Unused) Callback for **AVTransHandler**.

Parameters

avth	The transition handler.
buffer	*(Filled by the callback)* The instruction text.
bufLen	Length of **buffer**, in bytes.

Return Value

The number of characters copied into **buffer**.

Header File

AVExpT.h

Related Callbacks

AVActionGetInstructionsProc

AVTransHandlerGetStringOneTextProc

```
ACCB1 ASInt32 ACCB2 AVTransHandlerGetStringOneTextProc
(AVTransHandler avth, char* buffer, ASInt32 bufLen);
```

Description

Callback for **AVTransHandler**. Gets a localized string that appears above the button on the transition settings dialog box.

Parameters

avth	The transition handler.
buffer	*(Filled by the callback)* The string text appearing above the button.
bufLen	Length of **buffer**, in bytes.

Return Value

The number of characters copied into **buffer**.

Header File

AVExpT.h

Related Callbacks

AVTransHandlerGetStringTwoTextProc

AVTransHandlerGetStringTwoTextProc

```
ACCB1 ASInt32 ACCB2 AVTransHandlerGetStringTwoTextProc
(AVTransHandler avth, char* buffer, ASInt32 bufLen);
```

Description

Callback for **AVTransHandler**. Gets a localized string that appears below the button on the transition settings dialog box.

Parameters

avth	The transition handler.
buffer	*(Filled by the callback)* The string text appearing below the button.
bufLen	Length of **buffer**, in bytes.

Return Value

The number of characters copied into **buffer**.

Header File

AVExpT.h

Related Callbacks

AVTransHandlerGetStringOneTextProc

AVTransHandlerGetTypeProc

```
ACCB1 ASAtom ACCB2 AVTransHandlerGetTypeProc
(AVTransHandler avth);
```

Description

Callback for **AVTransHandler**. Gets the transition type serviced by this handler. The handler for a given transition is found by comparing the result of **PDTransGetSubtype** to the value returned by the registered transition handler's **AVTransHandlerGetTypeProc** callbacks.

Parameters

avth	The transition handler.

Return Value

Type of transition handler, which may be one of the types provided in the Acrobat viewer or a new type registered by a plug-in.

Header File

AVExpT.h

Related Methods

PDTransGetSubtype

AVTransHandlerGetItemUINameProc

```
ACCB1 ASInt32 ACCB2 AVTransHandlerGetItemUINameProc
(AVTransHandler avth, ASInt32 item, char* buffer,
ASInt32 bufLen);
```

Description

Callback for **AVTransHandler**.

A transition handler can handle several distinct transitions. For example, the “Wipe” transition handler can create four distinct effects: wipe left, wipe right, wipe up, and wipe down.

The transition setting dialog box should create a separate user interface entry for each distinct transition. It determines both the number and names of the distinct transition types by repeatedly calling each transition handler’s **AVTransHandlerGetItemUINameProc** callback, starting with an item number of 0 and increasing until **AVTransHandlerGetItemUINameProc** returns an empty string.

Thus when the transaction handler is selected from the list, this callback is called. The transition handler should fill in the **Type** and **S** fields. **AVTransHandlerGetItemUINameProc** should fill in any default values. This information is passed into the **AVTransHandlerDoPropertiesProc** in the form of a **PDTrans** if that callback exists.

Parameters

avth	The transition handler.
item	The item number.
buffer	*(Filled by the callback)* The name of the transition in the user interface. This string should be localized.
bufLen	Length of **buffer**, in bytes.

Return Value

The number of characters copied into **buffer**.

Header File

AVExpT.h

Related Callbacks

AVTransHandlerGetUINameProc

AVTransHandlerGetUINameProc

```
ACCB1 ASInt32 ACCB2 AVTransHandlerGetUINameProc
(AVTransHandler avth, PDTrans trans, char* buffer,
ASInt32 bufLen);
```

Description

Callback for **AVTransHandler**. Retrieves the user-interface name for an existing **PDTrans**. For example, if the transition type is “Wipe” and the direction is 180, **AVTransHandlerGetUINameProc** would return “Wipe Left,” localized.

A transition handler can handle several distinct transitions. For example, the “Wipe” transition handler can create four distinct effects: wipe left, wipe right, wipe up, and wipe down.

The transition setting dialog box creates a separate user-interface entry for each distinct transition. It determines both the number and names of the distinct transition types by repeatedly calling each transition handler’s **AVTransHandlerGetUINameProc** callback, starting with an item number of 0 and increasing until the **AVTransHandlerGetUINameProc** callback returns an empty string.

The string returned by **AVTransHandlerGetUINameProc** should be localized.

The **AVTransHandlerGetUINameProc** is used to enumerate the entire list of supported transition effects that the handler wishes to display in the popup menu (for example, “Wipe Left” for item == 0, “Wipe Right” for item == 1, and so on).

Parameters

avth	The transition handler.
trans	The transition whose name is obtained.
buffer	*(Filled by the callback)* The user-interface name of the transition.
bufLen	Length of **buffer**, in bytes.

Return Value

The number of characters copied into **buffer**.

Header File

AVExpT.h

Related Callbacks

AVTransHandlerGetItemUINameProc

AVTransHandlerInitTransDictProc

```
ACCB1 void ACCB2 AVTransHandlerInitTransDictProc
(AVTransHandler avth, CosObj transDict);
```

Description

Callback for **AVTransHandler**. This method should set default values in the transition dictionary, **transDict**.

As soon as the handler is selected from the list, **AVTransHandlerInitTransDictProc** is called. This function should fill in the **Type** and **S** fields of **transDict**. **AVTransHandlerInitTransDictProc** should also fill in any default values. This information is passed to **AVTransHandlerDoPropertiesProc** in the form of a **PDTrans** if **AVTransHandlerDoPropertiesProc** exists.

Normally the **Type** and **S** fields are filled in when the transition is created via **PDTransNewFromCosDoc**. The implementation then calls **AVTransHandlerInitTransDictProc** and **AVTransHandlerCompleteTransDictProc** immediately on the newly-created **PDTrans**.

Parameters

avth	The transition handler.
transDict	Transition dictionary to set.

Return Value

None

Header File

AVExpT.h

Related Callbacks

AVTransHandlerCompleteTransDictProc

Related Methods

PDTransNewFromCosDoc

AVWindowAdjustCursorProc

```
ACCB1 void ACCB2 AVWindowAdjustCursorProc (AVWindow win,
ASInt16 x, ASInt16 y);
```

Description

Callback for **AVWindowHandler**. Called periodically while the cursor is over the **AVWindow** (if the window is active). Use this to adjust the cursor's appearance.

Parameters

win	The window containing the cursor.
x	The cursor's x-coordinate.
y	The cursor's y-coordinate.

Return Value

None

Header File

AVExpT.h

Related Callbacks

None

AVWindowCanPerformEditOpProc

```
ACCB1 ASBool ACCB2 AVWindowCanPerformEditOpProc (AVWindow win,
ASAtom editOp);
```

Description

Callback for **AVWindowHandler**. Called before showing the **Edit** menu, to determine whether or not to enable the **Edit** menu item corresponding to the given **ASAtom**.

Parameters

win	The current window.
editOp	**ASAtom** specifying the edit operation. Must be an **ASAtom** corresponding to one the strings: **Cut**, **Copy**, **Paste**, **Clear**, **SelectAll**, and **Undo**.

Return Value

true if the specified operation can be performed, **false** otherwise.

Header File

AVExpT.h

Related Callbacks

AVWindowPerformEditOpProc

AVWindowDestroyPlatformThingProc

```
ACCB1 void ACCB2 AVWindowDestroyPlatformThingProc
(AVWindow win, void* platformThing);
```

Description

Callback for **AVWindowHandler**. Called when it's time to dispose of the **platformThing** for the window passed to **AVWindowNewFromPlatformThing**.

Parameters

win	The window.
AVRect	The platform-specific object (**WindowPtr** in Mac OS, an **HWND** in Windows, and a **Widget** in UNIX) that was used for this window**.**

Return Value

None

Header File

AVExpT.h

Related Callbacks

None

Related Methods

AVWindowNewFromPlatformThing

AVWindowDidActivateProc

```
ACCB1 void ACCB2 AVWindowDidActivateProc (AVWindow win);
```

Description

Callback for **AVWindowHandler**. Called after the window has been activated. The window being activated will not always become the front-most window.

Parameters

win	The window being activated.

Return Value

None

Header File

AVExpT.h

Related Callbacks

AVWindowWillDeactivateProc

AVWindowDidBecomeKeyProc

```
ACCB1 void ACCB2 AVWindowDidBecomeKeyProc (AVWindow win);
```

Description

Callback for **AVWindowHandler**. Called after the window becomes the key window.

Parameters

win	The window becoming the key window.

Return Value

None

Header File

AVExpT.h

Related Callbacks

AVWindowWillResignKeyProc

Related Methods

AVWindowSetWantsKey

AVWindowDidCloseProc

```
ACCB1 void ACCB2 AVWindowDidCloseProc (AVWindow win);
```

Description

Callback for **AVWindowHandler**. Called immediately after the window has been closed, but before it has been freed. You may want to explicitly destroy the window in this routine. See also **AVWindowWillCloseProc**.

Parameters

win	The window that was closed.

Return Value

None

Header File

AVExpT.h

Related Callbacks

AVWindowWillCloseProc

Related Methods

AVWindowUserClose

AVWindowDidResizeProc

```
ACCB1 void ACCB2 AVWindowDidResizeProc (AVWindow win,
const AVRect* newFrame);
```

Description

Callback for **AVWindowHandler**. Called after the window has been resized.

Parameters

win	The window that was resized.
AVRect	Rectangle specifying the window's new size and location.

Return Value

None

Header File

AVExpT.h

Related Callbacks

None

AVWindowDrawProc

```
ACCB1 void ACCB2 AVWindowDrawProc (AVWindow win,
const AVRect* rect);
```

Description

Callback for **AVWindowHandler**. Called whenever the window needs to refresh some part of its interior. It should redraw the contents of the specified rectangle.

Parameters

win	The window whose content is redrawn.
rect	The region of **win** to redraw.

Return Value

None

Header File

AVExpT.h

Related Methods

AVWindowDrawNow

AVWindowKeyDownProc

```
ACCB1 void ACCB2 AVWindowKeyDownProc (AVWindow win, char key,
void* platformEvent);
```

Description

Callback for **AVWindowHandler**. Called to handle keystrokes when this is the key window.

Parameters

win	The window.
key	The key that was pressed.
platformEvent	Platform-specific event record: Macintosh — Pointer to an **EventRecord**. UNIX — **eventPtr**.

Return Value

None

Header File

AVExpT.h

Related Callbacks

AVWindowMouseDownProc

AVWindowMouseDownProc

```
ACCB1 void ACCB2 AVWindowMouseDownProc (AVWindow win,
ASInt16 x, ASInt16 y, void* platformEvent);
```

Description

Callback for **AVWindowHandler**. Mouse clicks in the **AVWindow** are dispatched through this callback.

Parameters

win	The window in which the click occurred.
x	The click's x-coordinate.
y	The click's y-coordinate.
platformEvent	Platform-specific event record: Macintosh — Pointer to an **EventRecord**. UNIX — **eventPtr**.

Return Value

None

Header File

AVExpT.h

Related Callbacks

AVWindowKeyDownProc

AVWindowPerformEditOpProc

```
ACCB1 void ACCB2 AVWindowPerformEditOpProc (AVWindow win,
ASAtom editOp);
```

Description

Callback for **AVWindowHandler**. Called when the user has chosen an **Edit** menu item, if the corresponding **AVWindowCanPerformEditOpProc** returned **true**.

Parameters

win	The window that the edit menu item is to act on.
editOp	An **ASAtom** specifying the edit operation. Must be an **ASAtom** corresponding to one the strings: **Cut**, **Copy**, **Paste**, **Clear**, **SelectAll**, and **Undo**.

Return Value

None

Header File

AVExpT.h

Related Callbacks

AVWindowCanPerformEditOpProc

AVWindowWillBeResizedProc

```
ACCB1 ASBool ACCB2 AVWindowWillBeResizedProc (AVWindow win,
AVRect* newFrame);
```

Description

Callback for **AVWindowHandler**. Called when the window is about to resize.

Parameters

win	The window to resize.
newFrame	Rectangle specifying the size to which the window will be resized. This callback may change the new frame size.

Return Value

true to permit the resizing, **false** to abort it.

Header File

AVExpT.h

Related Methods

AVWindowSetFrame

AVWindowWillCloseProc

```
ACCB1 ASBool ACCB2 AVWindowWillCloseProc (AVWindow win,
ASBool quitting);
```

Description

Callback for **AVWindowHandler**. The window is about to close.

Parameters

win	The window to close.
quitting	If **true**, the application is trying to quit.

Return Value

true if the window should close, **false** to abort the operation.

Header File

AVExpT.h

Related Methods

AVWindowUserClose

AVWindowWillDeactivateProc

```
ACCB1 void ACCB2 AVWindowWillDeactivateProc (AVWindow win);
```

Description

Callback for **AVWindowHandler**. Called before the window becomes deactivated or hidden.

Parameters

win	The window that will be deactivated.

Return Value

None

Header File

AVExpT.h

Related Callbacks

AVWindowDidActivateProc

AVWindowWillResignKeyProc

```
ACCB1 void ACCB2 AVWindowWillResignKeyProc (AVWindow win);
```

Description

Callback for **AVWindowHandler**. Called before the window ceases to be the key window.

Parameters

win	The window to resign key status.

Return Value

None

Header File

AVExpT.h

Related Callbacks

AVWindowDidBecomeKeyProc

CancelProc

```
ASBool CancelProc (void* clientData);
```

Description

This call has been replaced by **ASCancelProc**.

Callback to check for canceling operations. A **CancelProc** is typically passed to some method that takes a long time to complete. At frequent intervals, the method calls the **CancelProc**. If it returns **true**, then the method cancels its operation; if **false**, it continues.

Parameters

clientData	User-supplied data that was passed to the **CancelProc**.

Return Value

true if the processing is canceled, **false** otherwise.

Header File

ASExpT.h

Related Callbacks

PDFLPrintCancelProc (Only available with PDF Library SDK)

Related Methods

AVAppGetCancelProc

CosDocEnumEOFsProc

```
ACCB1 ASBool ACCB2 CosDocEnumEOFsProc (CosDoc cosDoc,
ASInt32 fileOffset, void* clientData);
```

Description

Callback for **CosDocEnumEOFs**. Called once for each EOF in a file.

Parameters

cosDoc	The **CosDoc** in which the EOF is found.
fileOffset	The offset into the file directly following the "%%**EOF**".
clientData	User-supplied data that was passed in the call to **CosDocEnumEOFs**.

Return Value

true to continue enumeration, **false** to halt the enumeration.

Header File

CosExpt.h

Related Callbacks

None

Related Methods

CosDocEnumEOFs

CosObjEnumProc

```
ACCB1 ASBool ACCB2 CosObjEnumProc (CosObj obj, CosObj value,
void* clientData);
```

Description

Callback for **CosObjEnum**, **CosDocEnumIndirect**, and **PDDocEnumResources**. Called once for each component of a composite Cos object (dictionary, array, and stream).

Parameters

obj	Dictionary — Key. Array — Array element. Stream — The stream's dictionary (the whole thing, not one key at a time).
value	Dictionary — Value associated with the Key. Array — **NULL** Cos object. Stream — **NULL** Cos object. For **CosDocEnumIndirect** and **PDDocEnumResources**, this is always the **NULL** Cos object.
clientData	User-supplied data that was passed in the call to **CosObjEnum**, **CosDocEnumIndirect**, or **PDDocEnumResources**.

Return Value

true to continue enumeration, **false** to halt enumeration.

Header File

CosExpT.h

Related Methods

CosObjEnum
CosDocEnumIndirect
PDDocEnumResources

CosObjOffsetProc

```
ACCB1 void ACCB2 CosObjOffsetProc (CosObj obj,
ASUns32 fileOffset, ASUns32 length, void* clientData);
```

Description

Callback for **PDDocSaveParams** used by **PDDocSaveWithParams**. Use this to get information about Cos objects of interest while a **PDDoc** is being saved.

Parameters

obj	The **CosObj** found.
fileOffset	The offset of **obj** into the PDF file.
length	length of **obj**.
clientData	Pointer to user-supplied data passed in the **offsetProcClientData** parameter of the **PDDocSaveParams** structure.

Return Value

None

Header File

CosExpt.h

Related Callbacks

None

Related Methods

PDDocSaveWithParams

CosObjSetCallbackFlagProc

```
ACCB1 ASBool ACCB2 CosObjSetCallbackFlagProc (CosObj obj,
ASBool set);
```

Description

Callback in **PDDocPreSaveInfo**, which is used by the **PDDocPreSaveProc** callback. Use this callback to set a flag in each **CosObj** that you care about, so that you will be called back during the **PDDoc**'s save and given the Cos object's offset and length. After a PDF file is saved, the Cos objects previously obtained are no longer valid.

Parameters

obj	The **CosObj** marked.
set	**true** to set the flag to be called back during the save, **false** otherwise.

Return Value

None

Header File

CosExpt.h

Related Callbacks

None

Related Methods

PDDocSaveWithParams

CrossDocLinkProc

```
ACCB1 AVDoc ACCB2 CrossDocLinkProc (ASPathName path,
ASFileSys fileSys, AVDocViewDef viewDef, AVDoc srcDoc,
void* data);
```

Description

Callback in **ExternalDocServerCreationData**. Called when a cross-document link is clicked in an **AVDoc** in an external application's window.

Parameters

path	Path to document to which the link points.
fileSys	The **ASFileSys** with which to open document.
viewDef	The **AVDocViewDef** with which to open document.
srcDoc	The **AVDoc** that contains the cross-document link.
data	User-supplied data that was passed in the call to **CrossDocLinkProc**.

Return Value

The **AVDoc** for the new document.

Header File

AvExpT.h

Related Methods

AVDocOpenFromASFileWithParams
AVDocOpenFromFileWithParams
AVDocOpenFromPDDocWithParams

CrossDocLinkWithDestProc

```
ACCB1 AVDoc ACCB2 CrossDocLinkWithDestProc (ASPathName path,
ASFileSys fileSys, AVDocViewDef viewDef, AVDestInfo destInfo,
AVDoc srcDoc, void* data);
```

Description

Callback in **ExternalDocServerCreationData**. Called when a cross-document link is clicked in an **AVDoc** in an external application's window.

Parameters

path	Path to document to which the link points.
fileSys	The **ASFileSys** with which to open document.
viewDef	The **AVDocViewDef** with which to open document.
destInfo	A destination in a PDF document.
srcDoc	The **AVDoc** that contains the cross-document link.
data	User-supplied data that was passed in the call to **CrossDocLinkProc**.

Return Value

The **AVDoc** for the new document.

Header File

AvExpT.h

Related Methods

AVDocOpenFromASFileWithParams
AVDocOpenFromFileWithParams
AVDocOpenFromPDDocWithParams

DeactivateProcType

```
ACCB1 void ACCB2 DeactivateProcType (AVTool tool);
```

Description

Callback for **AVTool**. Called when the tool will no longer be the active tool.

Parameters

tool	The tool to deactivate.

Return Value

None

Header File

AVExpT.h

Related Callbacks

ActivateProcType

Related Methods

AVAppSetActiveTool

DoClickProcType

```
ACCB1 ASBool ACCB2 DoClickProcType (AVTool tool,
AVPageView pageView, ASInt16 xHit, ASInt16 yHit,
ASInt16 flags, ASInt16 clickNo);
```

Description

Callback for **AVTool**. Handles mouse clicks when the tool is active. For Mac OS, this handles button or option-button mouse clicks. For Windows, this handles right or left button mouse clicks.

Parameters

tool	The tool.
pageView	The **AVPageView** in which the click occurred.
xHit	The click's x-coordinate.
yHit	The click's y-coordinate.
flags	Modifier keys that were held down while clicking. Must be an OR of the **Modifier Keys** values.
clickNo	1 if single click, 2 if double click, 3 if triple click.

Return Value

true if the callback handled the click, **false** if it did not and the click should be passed to the next click handling procedure.

Header File

AVExpT.h

Related Callbacks

DoKeyDownProcType

DoLeaveProcType

```
ACCB1 void ACCB2 DoLeaveProcType (AVTool tool,
AVPageView pageView);
```

Description

Callback for **AVTool**. Called when the tool leaves the page view, that is, when the cursor is moved out of the page view.

Parameters

tool	The tool.
pageView	The **AVPageView** that the tool left.

Return Value

None

Header File

AVExpT.h

Related Callbacks

None

DoKeyDownProcType

```
ACCB1 ASBool ACCB2 DoKeyDownProcType (AVTool tool,
ASUns16 key, ASInt16 flags);
```

Description

Callback for **AVTool**. Handles key presses when the tool is active.

Parameters

tool	The tool.
key	The key that was pressed.
flags	Modifier keys that were also pressed. Must be an OR of the **Modifier Keys** values.

Return Value

true if the callback handled the key press, **false** if it did not and the key press should be passed to the key press handling procedure.

Header File

AVExpT.h

Related Callbacks

DoClickProcType

GetSelectionServerProcType

```
ACCB1 AVDocSelectionServer ACCB2 GetSelectionServerProcType
(AVTool tool, AVDoc doc);
```

Description

Callback for **AVTool**. Gets the selection server associated with the tool, if any.

Parameters

tool	The tool.
doc	The active **AVDoc**.

Return Value

The selection server associated with this tool. Returns **NULL** if the tool has no selection server.

Header File

AVExpT.h

Related Callbacks

None

GetTypeProcType

```
ACCB1 ASAtom ACCB2 GetTypeProcType (AVTool tool);
```

Description

Callback for **AVTool**. Returns the tool's name.

Parameters

tool	The tool.

Return Value

The **ASAtom** corresponding to the tool's name.

Header File

AVExpT.h

Related Methods

AVAppGetToolByName

HFTServerDestroyProc

```
ACCB1 void ACCB2 HFTServerDestroyProc (HFTServer hftServer,
void* clientData);
```

Description

Callback for an **HFT** server. Destroys the specified **HFT** (for example, by calling **HFTServerDestroy**).

Parameters

hftServer	The **HFT** server associated with this destroy proc.
clientData	User-supplied data that was passed in the call to **HFTServerNew**.

Return Value

None

Header File

ASExpT.h

Related Methods

HFTServerNew
HFTDestroy

HFTServerProvideHFTProc

```
ACCB1 HFT ACCB2 HFTServerProvideHFTProc (HFTServer hftServer,
ASUns32 version, void* clientData);
```

Description

Callback for an **HFT** server. Returns an **HFT** with the specified version number. If the **HFT** has not yet been created, create and return it. If the **HFT** already exists, do not create a new copy of it; simply return the existing copy.

Parameters

hftServer	The **HFT** server associated with this proc.
version	The **HFT** version being requested.
clientData	User-supplied data passed in the call to **HFTServerNew**.

Return Value

The requested version of the **HFT**.

Header File

ASExpT.h

Related Methods

HFTServerNew

IsPersistentProcType

```
ACCB1 ASBool ACCB2 IsPersistentProcType (AVTool tool);
```

Description

Callback for **AVTool**. Indicates whether or not the tool would like to stay active after it has been used, or is a one-shot tool.

The Acrobat viewer does not contain any code to enforce a tool's request to be persistent; it is up to each tool to be a good citizen. For example, if a tool is not persistent, after that tool is used once it should get the previously active tool (using **AVAppGetLastActiveTool**) and check whether or not that tool wishes to be persistent (using **AVToolIsPersistent**). If so, set the active tool to that tool. If not, set the active tool to the default tool (obtained using **AVAppGetDefaultTool**).

Parameters

tool	The tool.

Return Value

true if the tool wishes to be persistent, **false** otherwise.

Header File

AVExpT.h

Related Methods

AVToolIsPersistent

PDAnnotHandlerDeleteAnnotInfoProc

```
ACCB1 void ACCB2 PDAnnotHandlerDeleteAnnotInfoProc
(PDAnnotHandler pdanh, PDAnnotInfo info);
```

Description

(Optional) Callback for **PDAnnotHandler**. Deletes information associated with an annotation. Frees all the memory associated with the annotation information.

Parameters

pdanh	The annotation handler responsible for this annotation.
info	Information associated with the annotation.

Return Value

None

Header File

PDExpt.h

Related Callbacks

AVAnnotHandlerDeleteInfoProc
PDAnnotHandlerGetAnnotInfoProc

Related Methods

PDRegisterAnnotHandler

PDAnnotHandlerGetAnnotInfoFlagsProc

```
ACCB1 ASUns32 ACCB2 PDAnnotHandlerGetAnnotInfoFlagsProc
(PDAnnotHandler pdanh, PDAnnot pdan);
```

Description

Callback for **PDAnnotHandler**. Gets the annotation handler info flags, which indicate the operations allowed with annotations of this type.

Parameters

pdanh	The annotation handler responsible for the annotation.
pdan	The annotation.

Return Value

Operations allowed. Is an OR of the following flags:

- **PDAnnotOperationSummarize** — OK to summarize annotations
- **PDAnnotOperationFilter** — OK to filter annotations
- **PDAnnotOperationManager** — OK to manage annotations
- **PDAnnotIgnorePerms** — Allow modifying this annotation type in a write-protected document
- **PDAnnotOperationAll** — All operations are allowed

Header File

PDExpt.h

Related Callbacks

PDAnnotHandlerGetAnnotInfoProc

Related Methods

PDRegisterAnnotHandler

PDAnnotHandlerGetAnnotInfoProc

```
ACCB1 PDAnnotInfo ACCB2 PDAnnotHandlerGetAnnotInfoProc
(PDAnnotHandler pdanh, PDAnnot pdan, PDPage pdpage);
```

Description

Callback for **PDAnnotHandler**. Gets the annotation information for an annotation.

Parameters

pdanh	The annotation handler responsible for this annotation.
pdan	The annotation for which information is obtained.
pdpage	The page associated with the annotation for which information is obtained. If the page associated with the annotation is not known, pass **NULL**.

Return Value

Annotation information, described in a **PDAnnotInfo** structure.

Header File

PDExpt.h

Related Callbacks

AVAnnotHandlerGetInfoProc
PDAnnotHandlerDeleteAnnotInfoProc

Related Methods

PDRegisterAnnotHandler

PDAnnotHandlerGetTypeProc

```
ACCB1 ASAtom ACCB2 PDAnnotHandlerGetTypeProc
(PDAnnotHandler pdanh);
```

Description

Callback for **PDAnnotHandler**. Gets an **ASAtom** indicating the annotation type for which the handler is responsible. This corresponds to the annotation's **Subtype** key in the PDF file.

Parameters

pdanh	The annotation handler whose type is returned.

Return Value

The annotation type for which this handler is responsible.

Header File

PDExpt.h

Related Callbacks

PDAnnotHandlerGetAnnotInfoProc

Related Methods

PDRegisterAnnotHandler

PDAnnotWillPrintProc

```
ACCB1 ASBool ACCB2 PDAnnotWillPrintProc (PDAnnotHandler pdanh,
PDAnnot annot);
```

Description

Callback for **PDAnnotHandler**. This method is called to determine whether or not an annotation is printed or not.

Parameters

pdanh	The annotation handler of the annotation type to print.
annot	The annotation to print.

Return Value

true if the annotation is printed, **false** if the annotation is not printed.

Header File

PDExpt.h

Related Callbacks

PDDocWillExportAnnotProc
PDDocWillImportAnnotProc

Related Methods

PDRegisterAnnotHandler

PDAuthProc

```
ACCB1 ASBool ACCB2 PDAuthProc (PDDoc pdDoc);
```

Description

Callback used by **PDDocOpen**. It is called when an encrypted document is being opened to determine whether or not the user is authorized to open the file.

This callback implements whatever authorization strategy you choose and calls the callbacks of the appropriate security handler (the one that was used to secure the document) to obtain and check authorization data.

The **PDAuthProc** must call the security handler's **PDCryptGetAuthDataProc** to obtain whatever authorization data is needed (such as a password), then call **PDDocAuthorize** (which is mostly a call to the security handler's **PDCryptAuthorizeProc**) to determine whether or not this data authorizes access to the file (for example, did the user provide the correct password). The **PDAuthProc** must also free the authorization data by calling the security handler's **PDCryptFreeAuthDataProc** (or **ASfree**, if the handler does not have a **PDCryptFreeAuthDataProc**.)

For Acrobat 3.0 and earlier, the correct way to obtain the security handler in a **PDAuthProc** is to call **PDDocGetNewCryptHandler**, relying on the fact that it returns the security handler if the document has no new security handler, and the fact that at the time the file is opened, it cannot yet have a new security handler. (In the future, one or more new methods may be added to make this procedure more straightforward.)

The Acrobat viewer's built-in authorization procedure works as follows:

```
Call the security handler's PDCryptAuthorizeProc with NULL
authorization data to automatically handle the case where no
authorization data is needed (for example, the file has a NULL
password).

If PDCryptAuthorizeProc returns true
     open the file

If PDCryptAuthorizeProc returns false then {
     Loop for i = 1 to 3 {
            Call the security handler's
            PDCryptGetAuthDataProc

            If PDCryptGetAuthDataProc returns true {
                  Call PDDocAuthorize

            If returns true {
            /* We got authorization */
                  Call the security handler's
                        PDCryptFreeAuthDataProc
            exit the loop and return from
```

```
                                    PDAuthProc
                }
                Call the security handler's
                        PDCryptFreeAuthDataProc
        }
        /* Failed to get authorization after
                three attempts */
        Display a dialog box indicating that
        user is not authorized to open the file.
}
return from PDAuthProc
```

Parameters

pdDoc	The **PDDoc** to open.

Return Value

true if the user is authorized to open the document, **false** otherwise.

Header File

PDExpT.h

Related Methods

PDDocAuthorize
PDDocOpen
PDDocOpenEx

PDAuthProcEx

```
ACCB1 ASBool ACCB2 PDAuthProcEx (PDDoc pdDoc,
void* clientData);
```

Description

Callback used by **PDDocOpenEx**. It is called when an encrypted document is being opened, to determine whether or not the user is authorized to open the file.

This callback implements whatever authorization strategy you choose and calls the callbacks of the appropriate security handler (the one that was used to secure the document) to obtain and check authorization data.

The **PDAuthProcEx** should obtain the authorization data (usually a password) and call **PDDocAuthorize**. **PDDocAuthorize** in turn calls the document encryption handler's **Authorize** function, which returns the permissions that the authorization data enables. **PDDocAuthorize** adds these permissions to those currently allowed, and returns the new set of allowed permissions.

Parameters

pdDoc	The **PDDoc** to open.
clientData	User-supplied data that was passed in the call to **PDDocOpenEx**.

Return Value

true if the user is authorized to open the document, **false** otherwise.

Header File

PDExpT.h

Related Methods

PDDocAuthorize
PDDocOpen
PDDocOpenEx

PDCharProcEnumProc

```
ACCB1 ASBool ACCB2 PDCharProcEnumProc (char* name,
PDCharProc obj, void* clientData);
```

Description

Callback for **PDFontEnumCharProcs**. It is called once for each character in a Type 3 font.

Parameters

name	The name of the current character.
obj	Stream Cos object containing the PDF drawing operators that draw the character.
clientData	User-supplied data that was passed in the call to **PDFontEnumCharProcs**.

Return Value

true to continue enumerating, **false** to halt enumeration.

Header File

PDExpT.h

Related Methods

PDFontEnumCharProcs

PDCryptAuthorizeExProc

```
ACCB1 PDPermReqStatus ACCB2 PDCryptAuthorizeExProc (PDDoc doc,
PDPermReqObj reqObj, PDPermReqOpr reqOpr, void* authData);
```

Description

Replaces **PDCryptAuthorizeProc**. **PDPerms** are now obsolete because Acrobat 5.0 introduces new permission controls. However, Acrobat still supports old security handlers.

Called whenever Acrobat needs to get authorization data and/or check permissions for operations.

Parameters

doc	The document for which the request is being made.
reqObj	Object type that is the focus of the request: one of the **PDPermReqObj** values.
reqOpr	Operation type that is the focus of the request: one of the **PDPermReqOpr** values.
authData	Authorization data. Its format is security handler-specific.

Return Value

The status of the request. One of the **PDPermReqStatus** values.

Header File

PDExpt.h

Related Callbacks

PDCryptAuthorizeProc

Related Methods

PDDocPermRequest

PDCryptAuthorizeProc

```
ACCB1 PDPerms ACCB2 PDCryptAuthorizeProc (PDDoc pdDoc,
void* authData, PDPerms permWanted);
```

Description

Callback for **PDCryptHandler**. Called by **PDDocAuthorize** when a user tries to set security for an encrypted document and by a **PDAuthProc** when a user tries to open a file.

It must decide, based on the contents of the authorization data structure, whether or not the user is permitted to open the file, and what permissions the user has for this file. The authorization data structure is available in making this decision. Alternate implementations may not require authorization data and may, for example, make authorization decisions based on data contained in the security data structure (use **PDCryptNewSecurityDataProc**).

This callback must *not* obtain the authorization data (for example, by displaying a user interface into which a user can type a password). Obtaining authorization data is handled by the security handler's **PDCryptGetAuthDataProc**, which must be called before this callback. Instead, **PDCryptAuthorizeProc** must work with whatever authorization data is passed to it.

It is legitimate for this callback to be called with **NULL** authorization data; the Acrobat viewer's built-in **authProc** does this in order to support authorization methods that do not require authorization data.

When this callback is invoked to determine whether or not a user is permitted to open a file, **permWanted** is set to **pdPermOpen.** In this case, the file's contents are not yet decrypted (since this callback is being asked to permit decryption), and some calls must be avoided. For example, a call that causes a page to be parsed results in an error, since the *encrypted* contents are parsed. In general, it is safe to obtain information about the presence or absence of things, or the number of things, and to examine any part of a document at the Cos level.

Parameters

pdDoc	The document for which authorized permissions are being requested.
authData	Authorization data. Its format is security handler-specific; each handler can select its own authorization data format.
permWanted	The permissions being requested. Is either **pdPermOpen** (if the file is being opened) or **pdPermSecure** (if a request is being made to change the document's security settings).

Return Value

The permissions granted based on the **authData**. For opening, the permissions returned usually should be **pdPermOpen** and some or all of **pdPermPrint**, **pdPermEdit**, and **pdPermCopy**. For setting security, permissions returned should be **pdPermAll**. However, if authorization fails, **0** should be returned.

Header File

PDExpT.h

Related Callbacks

PDCryptAuthorizeExProc

Related Methods

PDDocAuthorize
PDDocOpen
PDDocOpenEx

PDCryptBatchAuthorizeProc

```
ACCB1 PDPermReqStatus ACCB2 PDCryptBatchAuthorizeProc
(PDDoc pdDoc, PDPermReqObj reqObj, PDPermReqOpr reqOpr,
void* authData);
```

Description

Callback for **PDCryptBatchHandler**. Called when PDF file is opened. First called with **NULL authData** for the case without a user password. Called again with authorization data provided for the security handler that matches the one used in the PDF file.

NOTE: This function is called a batch operation and therefore should not display any user interface. During a batch operation, a file will first be opened with the **pdPermSecure** bit set. It will then be opened with the **pdPermOpen** bit set.

Parameters

pdDoc	The document being opened.
reqObj	Object type that is the focus of the request: one of the **PDPermReqObj** values.
reqOpr	Operation type that is the focus of the request: one of the **PDPermReqOpr** values.
authData	Authorization data. Its format is security handler-specific.

Return Value

PDPermReqStatus

Header File

PDExpt.h

Related Callbacks

None

Related Methods

None

PDCryptBatchFreeAuthDataProc

```
ACCB1 void ACCB2 PDCryptBatchFreeAuthDataProc
(void* authData);
```

Description

Callback for **PDCryptBatchHandler**. If provided, must be used to free **authData** acquired via **BatchGetAuthData** or **BatchNewAuthData**. If no **BatchFreeAuthData** function is provided, a default one will be used which calls **ASfree** on the authData if it is non-**NULL**.

Parameters

authData	Authorization data. Its format is security handler-specific.

Return Value

None

Header File

PDExpt.h

Related Callbacks

None

Related Methods

None

PDCryptBatchNewAuthDataProc

```
ACCB1 void ACCB2 PDCryptBatchNewAuthDataProc (void);
```

Description

Callback for **PDCryptBatchHandler**. Different from the regular **PDCryptHandler NewAuthData** function. Create and return a **void*** which is the authorization data for the batch security handler. This data should be used to both batch open files and batch secure files. Therefore, make sure to provide password information for both the **pdPermOpen** and **pdPermSecure** cases. This data will be passed to the **PDCryptBatchAuthorizeProc** callback and eventually to **PDCryptBatchFreeAuthDataProc** to free the data. This authorization data is collected before any files are opened in the batch sequence. It is permitted to display a UI at this point since the batch operation has not started yet. The data applies to all files, and therefore could represent one or more passwords which can be enumerated in the **BatchAuthorize** function which receives the batch **authData**.

Parameters

None

Return Value

None

Header File

PDExpt.h

Related Callbacks

None

Related Methods

None

PDCryptBatchParamDescProc

```
ACCB1 void ACCB2 PDCryptBatchParamDescProc
(const ASCab settings, ASCab paramDesc);
```

Description

Callback for **PDCryptBatchHandler**. Developer should provide information about the current batch settings for the security handler. Batch settings are provided as a read-only **ASCab** that is passed to the function. A writable **ASCab** is also provided, which should be used to store parameter information about the security handler. The description information should be stored starting in the **paramDesc ASCab** using **ASText** objects starting with key "1". Example: key="1", value="Title: API Reference" (**ASText** object)

Parameters

settings	Batch settings.
paramDesc	Description information.

Return Value

None

Header File

PDExpt.h

Related Callbacks

None

Related Methods

None

PDCryptBatchPostSequenceProc

```
ACCB1 void ACCB2 PDCryptBatchPostSequenceProc
(ASCab settings);
```

Description

Callback for **PDCryptBatchHandler**. This function is called at the end of a batch sequence after all files have been processed. Any memory that was allocated in the **BatchPreSequence** call should be cleaned up in this callback.

Parameters

settings	Batch settings.

Return Value

None

Header File

PDExpt.h

Related Callbacks

None

Related Methods

None

PDCryptBatchPreSequenceProc

```
ACCB1 ASBool ACCB2 PDCryptBatchPreSequenceProc
(ASCab settings);
```

Description

Callback for **PDCryptBatchHandler**. This function is called at the beginning of a batch sequence before any files have been opened. This allows a security handler to be called back with the **ASCab** of settings that were filled out by the **BatchShowDialog** function, or by an **ASCab** that was read in from disk. Pointers of security information are not serialized to disk, and therefore a security information structure may need to be regenerated based on other security information in the **ASCab**. It is permitted for the **BatchPreSequence** callback to put up a UI asking the user for more information since the batch sequence has not started yet. If this function returns **false**, the viewer will assume that the command cannot be executed and will cancel the sequence.

Parameters

settings	Batch settings.

Return Value

See above.

Header File

PDExpt.h

Related Callbacks

None

Related Methods

None

PDCryptBatchShowDialogProc

```
ACCB1 ASBool ACCB2 PDCryptBatchShowDialogProc
(ASCab settings);
```

Description

Callback for **PDCryptBatchHandler**. This callback puts up a dialog that allows a user to enter data that will be used to batch secure a series of files. The data is stored in an **ASCab** which is part of a batch sequence file. The actual security data, including password(s), should be stored as a pointer in the **ASCab** so that password information is not serialized to disk. Pointers are not serialized from **ASCab**s, but **ASText**s, **ASInt32**s, and **ASBool**s are serialized.

Parameters

settings	An object of type **ASCab**.

Return Value

true indicates success.

Header File

PDExpt.h

Related Callbacks

None

Related Methods

None

PDCryptBatchUpdateSecurityDataProc

```
ACCB1 ASBool ACCB2 PDCryptBatchUpdateSecurityDataProc
(PDDoc pdDoc, ASCab settings, ASAtom* cryptHandler,
void** secDataP);
```

Description

Callback for **PDCryptBatchHandler**. This function should update the crypt handler's security data without bringing up a dialog. This data is provided by a **PDCryptBatchShowDialogProc**. The current security data can be obtained by calling **PDDocGetNewSecurityData**. This function should return **true** unless there is a problem with the batch data for this security handler.

NOTE: This function is called a batch operation and therefore should not display any user interface.

Parameters

pdDoc	The document whose data is being updated.
settings	An object of type **ASCab**.
cryptHandler	An object of type **ASAtom**.
secDataP	Pointer to the document's security data.

Return Value

See above.

Header File

PDExpt.h

Related Callbacks

None

Related Methods

None

PDCryptDisplaySecurityDataProc

```
ACCB1 AVConversionStatus ACCB2 PDCryptDisplaySecurityDataProc
(PDDoc doc, ASAtom cryptHandler);
```

Description

Called when the security handler should bring up a document (security) info dialog with the current settings. It also should return **true** when the user wants to change the settings.

If this callback is not supplied, the default info dialog is displayed with **PDPerms** bits information (Acrobat 4.x equivalent dialog).

Parameters

doc	The document whose info is displayed.
cryptHandler	The registered name of the handler.

Return Value

true if the handler wishes a call back to change the settings, **false** otherwise.

Header File

PDExpt.h

Related Callbacks

None

Related Methods

None

PDCryptFillEncryptDictProc

```
ACCB1 void ACCB2 PDCryptFillEncryptDictProc (PDDoc pdDoc,
CosObj encryptDict);
```

Description

Callback for **PDCryptHandler**. Called when an encrypted document is saved. Fills the document's Encryption dictionary with whatever information the security handler wants to store in the document.

Normally this callback is called after **PDCryptUpdateSecurityDataProc**. The security data structure can be obtained with a call to **PDDocGetNewSecurityData**, and the **encryptDict** is filled based on this data.

The sequencing of events that the viewer performs during creation of the **encryptDict** is as follows:

- the viewer creates the **encryptDict**
- the viewer adds the Filter attribute to the dictionary
- calls this **PDCryptFillEncryptDictProc** to allow the security handler to add its own attributes to the dictionary
- calls the **PDCryptNewCryptDataExProc** (then **PDCryptNewCryptDataProc** if unsuccessful) to get the algorithm version, key, and key length
- checks if the V attribute has been added to the dictionary and, if not, then sets V to the algorithm version
- sets the Length attribute if V is 2 or greater
- adds the encryptDict to the document

Parameters

pdDoc	The document to save.
encryptDict	A dictionary Cos object to fill with whatever information the security handler wants to store in the PDF file. Unlike all other strings and streams, direct object elements of the **encryptDict** are *not* encrypted automatically. If you want them encrypted, you must encrypt them *before* inserting them into the dictionary.

Return Value

None

Header File

PDExpT.h

Related Methods

PDDocSave

PDCryptFreeAuthDataProc

```
ACCB1 void ACCB2 PDCryptFreeAuthDataProc (PDDoc pdDoc,
void* authData);
```

Description

(Optional) Callback for **PDCryptHandler**. Used to free authorization data acquired via **PDCryptNewAuthDataProc**. If this callback is omitted, the viewer defaults to freeing the data using **ASfree**.

Parameters

pdDoc	The document whose authorization data is freed.
authData	*(Filled by the callback)* Pointer to the document's authorization data.

Return Value

None

Header File

PDExpT.h

Related Callbacks

PDCryptNewAuthDataProc

Related Methods

PDDocGetNewSecurityInfo

PDCryptFreeCryptDataProc

```
ACCB1 void ACCB2 PDCryptFreeCryptDataProc (PDDoc pdDoc,
char* cryptData);
```

Description

(Optional) Callback for **PDCryptHandler**. Used to free authorization data acquired via **PDCryptNewCryptDataProc**. If this callback is omitted, the viewer defaults to freeing the data using **ASfree**.

Parameters

pdDoc	The document whose encryption/decryption data is freed.
cryptData	*(Filled by the callback)* Pointer to the document's encryption/decryption data.

Return Value

None

Header File

PDExpT.h

Related Callbacks

PDCryptNewCryptDataProc

Related Methods

PDDocGetNewSecurityInfo

PDCryptFreeSecurityDataProc

```
ACCB1 void ACCB2 PDCryptFreeSecurityDataProc (PDDoc pdDoc,
void* secData);
```

Description

(Optional) Callback for **PDCryptHandler**. Used to free security data acquired via **PDCryptNewSecurityDataProc**. If this callback is omitted, the viewer defaults to freeing the data using **ASfree**.

Parameters

pdDoc	The document whose security data is freed.
secData	*(Filled by the callback)* Pointer to the document's security data.

Return Value

None

Header File

PDExpT.h

Related Callbacks

PDCryptNewSecurityDataProc

Related Methods

PDDocGetNewSecurityInfo

PDCryptGetAuthDataExProc

```
ACCB1 PDPermReqStatus ACCB2 PDCryptGetAuthDataExProc
(PDDoc doc, PDPermReqObj reqObj, PDPermReqOpr reqOpr,
void** authData);
```

Description

Replaces **PDCryptGetAuthDataProc**. **PDPerms** are now obsolete because Acrobat 5.0 introduces new permission controls. However, Acrobat still supports old security handlers.

Called whenever Acrobat needs to get authorization data and/or check permissions for operations.

Parameters

doc	The document for which the request is being made.
reqObj	Object type that is the focus of the request: one of the **PDPermReqObj** values.
reqOpr	Operation type that is the focus of the request: one of the **PDPermReqOpr** values.
authData	Pointer to an authorization data structure. Its format is security handler specific.

Return Value

The status of the request. One of the **PDPermReqStatus** values.

Header File

PDExpt.h

Related Callbacks

PDCryptGetAuthDataProc

Related Methods

None

PDCryptGetAuthDataProc

```
ACCB1 ASBool ACCB2 PDCryptGetAuthDataProc (PDDoc pdDoc,
PDPerms permWanted, void** authDataP);
```

Description

Callback for **PDCryptHandler**. This callback is called from a **PDAuthProc** when a file is being opened after **PDCryptNewSecurityDataProc** is called.

The callback must determine the user's authorization properties for the document by obtaining authorization data, such as a user interface log in or password entry. It populates an authorization data structure with this data.

This callback may call the security handler's **PDCryptNewAuthDataProc** to allocate the authorization data structure. Use of an authorization data structure is optional (an implementation may wish to contain authorization data within the security data structure). The authorization data structure is subsequently used by the security handler's **PDCryptAuthorizeProc** to determine whether or not the user is authorized to open the file.

A security handler can specify the standard password dialog by using **AVCryptGetPassword**. In this case, the **authData** is a **char***.

Parameters

pdDoc	The document to open.
permWanted	Either **pdPermOpen** or **pdPermSecure**. Since this value is also passed to **PDCryptAuthorizeProc**, it may not be necessary for this callback to use **permWanted**.
authDataP	Pointer to authorization data structure. Set to **NULL** if not used.

Return Value

true unless the operation should be canceled (for example, if the user cancels a dialog), **false** otherwise.

Header File

PDExpT.h

Related Callbacks

PDCryptGetAuthDataExProc
PDCryptNewAuthDataProc

Related Methods

PDDocOpen
PDDocOpen
PDDocOpenEx

PDCryptGetSecurityInfoProc

```
ACCB1 void ACCB2 PDCryptGetSecurityInfoProc (PDDoc pdDoc,
ASUns32* secInfo);
```

Description

(Optional) Callback for **PDCryptHandler**. Called by **PDDocGetNewSecurityInfo**. Extracts the security information from the security data structure, and returns the security information.

This function is also used after a “Save As…” to reset the permissions according to the current document.

A default set of permissions (**pdInfoCanPrint | pdInfoCanEdit | pdInfoCanCopy | pdInfoCanEditNotes** (see **PDPerms**)) is used if this callback is absent.

Parameters

pdDoc	The document whose security info is obtained.
secInfo	*(Filled by the callback)* The document’s security info. The value must be an OR of the **Security Info Flags**. All unused bits in must be set to 1.

Return Value

None

Header File

PDExpT.h

Related Methods

PDDocGetNewSecurityInfo

PDCryptNewAuthDataProc

```
ACCB1 void* ACCB2 PDCryptNewAuthDataProc (PDDoc pdDoc);
```

Description

(Optional) Callback for **PDCryptHandler**. Creates a new empty authorization data structure. This structure is subsequently filled by **PDCryptGetAuthDataProc**, then passed to **PDCryptAuthorizeProc** and eventually to **ASfree**.

This callback is not called by the Acrobat viewer, but a security handler may use it if it wishes. The Acrobat viewer's standard security handler does not use this method.

Parameters

pdDoc	The document for which a new authorization data structure is created.

Return Value

The newly-created authorization data structure.

Header File

PDExpT.h

Related Callbacks

PDCryptFreeAuthDataProc
PDCryptGetAuthDataProc

PDCryptNewCryptDataProc

```
ACCB1 void ACCB2 PDCryptNewCryptDataProc (PDDoc pdDoc,
char** cryptData, ASInt32* cryptDataLen);
```

Description

Callback for **PDCryptHandler**. Sets up the key to be passed to initialize the RC4 cipher for encryption and decryption of a PDF file. It is called when an encrypted document is opened or saved.

Parameters

pdDoc	The document for which the key is set.
cryptData	*(Filled by the callback)* The key. **cryptData** must be allocated by **ASmalloc** because the Acrobat viewer will free it using **ASfree**.
cryptDataLen	*(Filled by the callback)* The number of bytes in **cryptData.** Cannot be greater than 5 bytes.

Return Value

None

Header File

PDExpT.h

Related Callbacks

PDCryptNewAuthDataProc

PDCryptNewCryptDataExProc

```
ACCB1 void ACCB2 PDCryptNewCryptDataExProc (PDDoc pdDoc,
char** cryptData, ASInt32* cryptDataLen,
ASInt32* cryptVersion);
```

Description

Callback for **PDCryptHandler**. Sets up the key to be passed to initialize the RC4 cipher for encryption and decryption of a PDF file. It is called when an encrypted document is opened or saved.

The key is truncated when the length is greater than the viewer currently supports. Data is freed by **PDCryptFreeCryptDataProc** if provided. Otherwise, **ASfree** is used.

Parameters

pdDoc	The document for which the key is set.
cryptData	*(Filled by the callback)* The key. **cryptData** must be allocated by **ASmalloc** because the Acrobat viewer will free it using **ASfree**.
cryptDataLen	*(Filled by the callback)* The number of bytes in **cryptData.** Cannot be greater than 5 bytes.
cryptVersion	The Cos crypt version—the version of the algorithm that is used to encrypt and decrypt document data. **cryptVersion** equal to 0 is treated as **cryptVersion** equal to 1 to maintain backward compatibility.

Return Value

None

Header File

PDExpT.h

Related Callbacks

PDCryptFreeCryptDataProc

PDCryptNewSecurityDataProc

```
ACCB1 void* ACCB2 PDCryptNewSecurityDataProc (PDDoc pdDoc,
PDCosObj encryptDict);
```

Description

(Optional) Callback for **PDCryptHandler**. Creates and populates a new structure that contains whatever security-related information the security handler requires (for example, permissions, whether or not the file has owner and/or user passwords, owner and/or user passwords, or other data used internally by the security handler). If **encryptDict** is not **NULL**, the structure should be populated based on **encryptDict**'s contents. This method is intended only to initialize the security data structure.

This callback is called under two circumstances:

- When a document is opened, it is called with **encryptDict** set to the document's Encryption dictionary. The handler should then populate the new security data structure with data that is obtained from the Encryption dictionary.
- When the user chooses a new encryption method, it is called without an **encryptDict**. The handler should return a security data structure with default values.

If a security handler does not have this callback, the document's **newSecurityData** field is set to **NULL**.

If a file is to be saved, then **PDCryptUpdateSecurityDataProc** is subsequently called to allow user interface modification of the contents.

Security data is freed using **PDCryptFreeSecurityDataProc**. If **PDCryptFreeSecurityDataProc** is not defined, **ASfree** is used.

Parameters

pdDoc	The document for which a new security data structure is created.
encryptDict	If **encryptDict** is a dictionary, this callback must initialize the security data so that it corresponds to the dictionary. Otherwise, it must set up default values in the security data structure.

Return Value

The newly-created security data structure.

Header File

PDExpT.h

Related Callbacks

PDCryptFreeSecurityDataProc

PDCryptReservedProc

```
ACCB1 void* ACCB2 PDCryptReservedProc (void);
```

Description

(Optional) Callback for **PDCryptHandler**. Used by Acrobat WebBuy proprietary method of passing crypt data.

Parameters

None

Return Value

None

Header File

PDExpt.h

Related Callbacks

None

Related Methods

None

PDCryptUpdateSecurityDataProc

```
ACCB1 ASBool ACCB2 PDCryptUpdateSecurityDataProc (PDDoc pdDoc,
ASAtom* cryptHandler, void** secDataP);
```

Description

Callback for **PDCryptHandler**. Updates the security data structure that was created by **PDCryptNewSecurityDataProc**. This structure can be obtained by calling **PDDocGetNewSecurityData**. The security data structure of the previously saved file can be obtained with a call to **PDDocGetSecurityData**.

The security data structure should be updated to reflect the encryption parameters that will be used when saving the file. (This information is usually obtained via dialogs.) The encryption parameters are transferred to the Encrypt dictionary by a subsequent callback to **PDCryptFillEncryptDictProc**.

The security data should be allocated by **ASmalloc** or a related function. Security data is freed using **PDCryptFreeSecurityDataProc**. If **PDCryptFreeSecurityDataProc** is not defined, **ASfree** is used.

The callback can also update the security handler itself. For example, the standard encryption handler switches to no encryption if no passwords or permissions are set in the security dialog box. Return **ASAtomNull** in **cryptHandler** if no encryption is used in the saved file.

Parameters

pdDoc	The document whose security data is updated.
cryptHandler	The current security handler for **pdDoc**. Can be modified to change the security handler. Encryption is turned off if **ASAtomNull** is set.
secDataP	(*Required*) Security data structure. Its content and organization is up to the security handler.

Return Value

Return **true** unless the operation should be canceled (for example, the user clicked on the Cancel button).

Header File

PDExpT.h

Related Callbacks

PDCryptValidateSecurityDataProc

Related Methods

PDDocGetSecurityData

PDCryptValidateSecurityDataProc

```
ACCB1 void ACCB2 PDCryptValidateSecurityDataProc (PDDoc pdDoc,
void* secData);
```

Description

(Optional) Callback for **PDCryptHandler**. Validates the security data structure, which specifies the user's permissions. This callback may modify the security data structure, for example because the user is not authorized to change the security as they requested. A client may have called **PDDocNewSecurityData** to obtain a new security data structure, then modified it, and then called **PDDocSetNewSecurityData** to change the document security. This callback should be called before actually setting the document's security data.

This callback is not called automatically by the Acrobat viewer. It must be called, if desired, by the security handler's **PDCryptUpdateSecurityDataProc**.

Parameters

pdDoc	The document whose security data is validated.
secData	*(May be modified by the callback)* The document's security data.

Return Value

None

Header File

PDExpT.h

Related Callbacks

PDCryptUpdateSecurityDataProc

Related Methods

PDDocNewSecurityData
PDDocSetNewSecurityData

PDDocEnumProc

```
ACCB1 ASBool ACCB2 PDDocEnumProc (PDDoc pdDoc,
void* clientData);
```

Description

Callback for **PDEnumDocs**. It is called once for each open **PDDoc**.

Parameters

pdDoc	The **PDDoc** currently being enumerated.
clientData	User-supplied data that was passed in the call to **PDEnumDocs**.

Return Value

true to continue enumeration, **false** to halt enumeration.

Header File

PDExpT.h

Related Methods

PDEnumDocs

PDDocPreSaveProc

```
ACCB1 void ACCB2 PDDocPreSaveProc (PDDoc pdDoc,
PDDocPreSaveInfo preSaveInfo, void* clientData);
```

Description

Callback in the **PDDocSaveParams** structure used by **PDDocSaveWithParams**. Use this callback to flag Cos objects you wish to access while a **PDDoc** is being saved.

Parameters

pdDoc	The **PDDoc** to be saved.
preSaveInfo	A **PDDocPreSaveInfo** structure containing information to use during processing before the save.
clientData	User-supplied data that was specified in **preSaveProcClientData** of the **PDDocSaveParams** structure.

Return Value

None

Header File

PDExpt.h

Related Callbacks

None

Related Methods

PDDocSaveWithParams

PDDocWillExportAnnotCallback

```
ACCB1 ASBool ACCB2 PDDocWillExportAnnotCallback (PDDoc doc,
PDPage pdpage, PDAnnot annot, CosObj dict);
```

Description

Callback for **PDDocExportNotes**. Determines whether an annotation is exported or not.

NOTE: This is a different callback than **PDDocWillExportAnnotProc**.

Parameters

doc	The document from which annotations may be exported.
pdPage	The page from which the annotation may be exported.
annot	The annotation that may be exported.
dict	Copy of **annot** in a Cos object.

Return Value

true to export **annot, false** to not export **annot.**

Header File

PDExpt.h

Related Callbacks

PDDocWillImportAnnotCallback

Related Methods

None

PDDocWillExportAnnotProc

```
ACCB1 ASBool ACCB2 PDDocWillExportAnnotProc
(PDAnnotHandler pdanh, PDAnnot src, PDAnnot dst);
```

Description

Callback for **PDAnnotHandler**. Determines whether an annotation is exported or not.

NOTE: This is a different callback than **PDDocWillImportAnnotCallback**.

Parameters

pdanh	The annotation handler of the annotation type to export.
src	The annotation that may be exported.
dst	Copy of **src**, which is actually exported.

Return Value

true to export **dst, false** to not export **dst.**

Header File

PDExpt.h

Related Callbacks

PDAnnotWillPrintProc
PDDocWillImportAnnotProc

Related Methods

PDRegisterAnnotHandler

PDDocWillImportAnnotCallback

```
ACCB1 ASBool ACCB2 PDDocWillImportAnnotCallback (PDDoc doc,
PDPage pdPage, PDAnnot annot);
```

Description

Callback for **PDDocImportCosDocNotes** and **PDDocImportNotes**. Determines whether an annotation will be imported or not.

NOTE: This is a different callback than **PDDocWillImportAnnotProc**.

Parameters

doc	The document into which annotations may be imported.
pdPage	The page in which the annotation may be imported.
annot	The annotation that may be imported.

Return Value

true to import **annot, false** to not import **annot.**

Header File

PDExpt.h

Related Callbacks

PDDocWillExportAnnotCallback

Related Methods

None

PDDocWillImportAnnotProc

```
ACCB1 ASBool ACCB2 PDDocWillImportAnnotProc
(PDAnnotHandler pdanh, PDDoc doc, PDPage pdpage,
PDAnnot annot);
```

Description

Callback for **PDAnnotHandler**. Determines whether an annotation will be imported or not.

NOTE: This is a different callback than **PDDocWillImportAnnotCallback**.

Parameters

pdanh	The annotation handler of the annotation type to import.
doc	The document into which annotations may be imported.
pdPage	The page in which the annotation may be imported.
annot	The annotation that may be imported.

Return Value

true to import **annot**, **false** to not import **annot**.

Header File

PDExpt.h

Related Callbacks

PDAnnotWillPrintProc
PDDocWillExportAnnotProc

Related Methods

PDRegisterAnnotHandler

PDEAttrEnumProc

```
ACCB1 ASBool ACCB2 PDEAttrEnumProc (void* attrHdrP,
ASUns32 refCount, ASUns16 size, void* clientData);
```

Description

Callback for **PDEAttrEnumTable**. It is called once for each attribute in a table.

Parameters

attrHdrP	An opaque pointer to the attribute. The actual attribute type is not specified in this function, since the storage mechanism only knows the size of the attribute, not its type.
refCount	Reference count of the attribute.
size	Size of **attrHdrP**, in bytes.
clientData	User-supplied data that was specified in the call to **PDEAttrEnumTable**.

Return Value

Return **true** to continue enumeration, **false** to halt enumeration.

Header File

PEExpT.h

Related Methods

PDEAttrEnumTable

PDEClipEnumProc

```
ACCB1 ASBool ACCB2 PDEClipEnumProc (PDEElement elem,
void* clientData);
```

Description

Callback for **PDEClipFlattenedEnumElems**, which enumerates all of a **PDEClip**'s **PDEElement**s in a flattened manner.

Parameters

elem	The **PDEElement** currently being enumerated.
clientData	User-supplied data that was passed in the call to **PDEClipFlattenedEnumElems**.

Return Value

If **false**, enumeration halts. If **true**, enumeration continues.

Header File

PEExpt.h

Related Callbacks

None

Related Methods

PDEClipFlattenedEnumElems

PDEElementEnumProc

```
ACCB1 ASBool ACCB2 PDEElementEnumProc (PDEElement element,
void* clientData);
```

Description

Callback for **PDEEnumElements**. It is called once for each **PDEElement** in a page's Contents Stream or Resources dictionary.

Parameters

element	The **PDEElement**.
clientData	User-supplied data that was specified in the call to **PDEEnumElements**.

Return Value

Return **true** to continue enumeration, **false** to halt enumeration.

Header File

PEExpT.h

Related Methods

PDEEnumElements

PDEObjectDumpProc

```
ACCB1 void ACCB2 PDEObjectDumpProc (PDEObject obj,
char* dumpInfo, void* clientData);
```

Description

Callback for **PDELogDump** or **PDEObjectDump**. It is called once for each **PDEObject**, its children, and their attributes for the specified number of levels.

Parameters

obj	The **PDEObject**.
dumpInfo	Contains information about an object. Information fields are delimited by tabs. There are no newline characters in this string.
clientData	User-supplied data that was specified in the call to **PDELogDump** or **PDEObjectDump**.

Return Value

None

Header File

PEExpT.h

Related Methods

PDELogDump
PDEObjectDump

PDFileSpecAcquireASPathProc

```
ACCB1 ASPathName ACCB2 PDFileSpecAcquireASPathProc
(void* fileSpecHandlerObj, PDFileSpec fileSpec,
ASPathName relativeToThisPath);
```

Description

Callback for **PDFileSpecHandler**. Acquires the **ASPath** corresponding to a file specification.

Parameters

fileSpecHandlerObj	User-supplied data passed in the call to **PDRegisterFileSpecHandler**.
fileSpec	The **PDFileSpec** for which an **ASPath** is acquired.
relativeToThisPath	A pathname relative to which the **PDFileSpec** is interpreted. If **NULL**, **fileSpec** is assumed to be an absolute, not a relative, path.

Return Value

The **ASPathName** corresponding to the specified path.

Header File

PDExpT.h

Related Methods

PDFileSpecAcquireASPath

PDFileSpecNewFromASPathProc

```
ACCB1 PDFileSpec ACCB2 PDFileSpecNewFromASPathProc
(void* fileSpecHandlerObj, PDDoc pdDoc, ASPathName path,
ASPathName relativeToThisPath);
```

Description

Callback for **PDFileSpecHandler**. Creates a file specification from an **ASPath**.

Parameters

fileSpecHandlerObj	User-supplied data passed in the call to **PDRegisterFileSpecHandler**.
pdDoc	The **PDDoc** in which the file specification is created.
path	The **ASPathName** for which a corresponding file specification is created.
relativeToThisPath	A pathname relative to which **path** is interpreted. If **NULL**, **path** is assumed to be an absolute, not a relative, path.

Return Value

The file specification corresponding to the specified **ASPathName**.

Header File

PDExpT.h

Related Methods

PDFileSpecNewFromASPath

PDFontEnumProc

```
ACCB1 ASBool ACCB2 PDFontEnumProc (PDFont font, char* encName,
void* clientData);
```

Description

Callback used by **PDDocEnumFonts** and **PDDocEnumLoadedFonts**. It is called once for each font.

Parameters

font	The font currently being enumerated.
encName	Unused, contains an empty string.
clientData	User-supplied data passed in the call to **PDDocEnumFonts** or **PDDocEnumLoadedFonts**.

Return Value

true to continue enumeration, **false** to halt enumeration.

Header File

PDExpT.h

Related Methods

PDDocEnumFonts
PDDocEnumLoadedFonts

PDGetDataProc

```
ACCB1 ASBool ACCB2 PDGetDataProc (char* data, ASUns32 lenData,
void* clientData);
```

Description

Callback for **PDXObjectGetData**. It is passed the **XObject**'s data. Currently, the **XObject**'s data is read 1 kB at a time and passed to this callback.

Parameters

data	Buffer containing the **XObject**'s data.
lenData	The amount of data in **data**, in bytes.
clientData	User-supplied data that was passed in the call to **PDXObjectGetData**.

Return Value

true to continue reading the **XObject**'s data, **false** to halt it.

Header File

PDExpT.h

Related Methods

PDXObjectGetData

PDGraphicEnumCacheDeviceProc

```
ACCB1 ASBool ACCB2 PDGraphicEnumCacheDeviceProc
(ASFixed* parms, void* clientData);
```

Description

Callback for **PDGraphicEnumMonitor**. Called for every **d1** (that is, **setcachedevice**) operator.

Parameters

parms	Array of numbers containing the 6 parameters passed to the **d1** operator.
clientData	User-supplied data that was passed in the call to **PDPageEnumContents**.

Return Value

true to continue enumeration, **false** to halt enumeration.

Header File

PDExpT.h

Related Methods

PDPageEnumContents

PDGraphicEnumCharWidthProc

```
ACCB1 ASBool ACCB2 PDGraphicEnumCharWidthProc
(ASFixedPoint width, void* clientData);
```

Description

Callback for **PDGraphicEnumMonitor**. Called for every **d0** (that is, **setcharwidth**) operator.

Parameters

width	Array of numbers containing the two parameters passed to the **d0** operator.
clientData	User-supplied data that was passed in the call to **PDPageEnumContents**.

Return Value

true to continue enumeration, **false** to halt enumeration.

Header File

PDExpT.h

Related Methods

PDPageEnumContents

PDGraphicEnumImageProc

```
ACCB1 ASBool ACCB2 PDGraphicEnumImageProc (PDInlineImage obj,
void* clientData);
```

Description

Callback for **PDGraphicEnumMonitor**. Called for every image operator.

Parameters

obj	Image data.
clientData	User-supplied data that was passed in the call to **PDPageEnumContents**.

Return Value

true to continue enumeration, **false** to halt enumeration.

Header File

PDExpT.h

Related Methods

PDPageEnumContents

PDGraphicEnumPathProc

```
ACCB1 ASBool ACCB2 PDGraphicEnumPathProc (PDPath obj,
void* clientData);
```

Description

Callback for **PDGraphicEnumMonitor**. Called for every path operator.

Parameters

obj	The path data.
clientData	User-supplied data that was passed in the call to **PDPageEnumContents**.

Return Value

true to continue enumeration, **false** to halt enumeration.

Header File

PDExpT.h

Related Methods

PDPageEnumContents

PDGraphicEnumRestoreProc

```
ACCB1 ASBool ACCB2 PDGraphicEnumRestoreProc
(void* clientData);
```

Description

Callback for **PDGraphicEnumMonitor**. Called for every **Q** (**restore**) operator.

Parameters

clientData	User-supplied data that was passed in the call to **PDPageEnumContents**.

Return Value

true to continue enumeration, **false** to halt enumeration.

Header File

PDExpT.h

Related Methods

PDPageEnumContents

PDGraphicEnumSaveProc

```
ACCB1 ASBool ACCB2 PDGraphicEnumSaveProc (void* clientData);
```

Description

Callback for **PDGraphicEnumMonitor**. Called for every **Q** (**save**) operator.

Parameters

clientData	User-supplied data that was passed in the call to **PDPageEnumContents**.

Return Value

true to continue enumeration, **false** to halt enumeration.

Header File

PDExpT.h

Related Methods

PDPageEnumContents

PDGraphicEnumTextProc

```
ACCB1 ASBool ACCB2 PDGraphicEnumTextProc (PDText obj,
void* clientData);
```

Description

Callback for **PDGraphicEnumMonitor**. Called for every text operator.

Parameters

obj	The text object.
clientData	User-supplied data that was passed in the call to **PDPageEnumContents**.

Return Value

true to continue enumeration, **false** to halt enumeration.

Header File

PDExpT.h

Related Methods

PDPageEnumContents

PDGraphicEnumXObjectRefProc

```
ACCB1 ASBool ACCB2 PDGraphicEnumXObjectRefProc (char* name,
ASFixedRect* bbox, void* clientData);
```

Description

Callback for **PDGraphicEnumMonitor**. Called for every **XObject** (**Do**) operator.

Parameters

name	The **XObject**'s name.
bbox	The **XObject**'s bounding box, describing the bounding box of the **XObject** in user space. This is only the case for top-level **XObject**s. If a Form **XObject** refers to another **XObject**, the second **XObject**'s bounding box is the "infinity" bounding box.
clientData	User-supplied data that was passed in the call to **PDPageEnumContents**.

Return Value

true to continue enumeration, **false** to halt enumeration.

Header File

PDExpT.h

Related Methods

PDPageEnumContents

PDGraphicEnumXObjectRefMatrixProc

```
ACCB1 ASBool ACCB2 PDGraphicEnumXObjectRefMatrixProc
(ASFixedMatrix* matrix, void* clientData);
```

Description

Callback for **PDGraphicEnumMonitor**. Gets the current matrix for the subsequent **XObject**. Called immediately before **PDGraphicEnumXObjectRefProc**.

Parameters

matrix	(Filled by the callback) The current transformation matrix for the subsequent **XObject** whose name is obtained by **PDGraphicEnumXObjectRefProc**.
clientData	User-supplied data that was passed in the call to **PDPageEnumContents**.

Return Value

true to continue enumeration, **false** to halt enumeration.

Header File

PDExpT.h

Related Methods

PDPageEnumContents

PDImplicitMetadataProc

```
ACCB1 void ACCB2 PDImplicitMetadataProc (PDDoc pdDoc,
void* data);
```

Description

Calculates implicit metadata. Clients that maintain metadata items that have to be recalculated should register for the **PDDocCalculateMetadata** notification with this callback. The callback should obtain the metadata with which it's concerned, change it, and put the changed metadata back on the object from which it was obtained.

Parameters

pdDoc	The document containing the metadata.
data	User-supplied data.

Return Value

None

Header File

PDMetadataExpT.h

Related Notifications

PDDocCalculateMetadata

PDLaunchActionProc

```
ACCB1 ASBool ACCB2 PDLaunchActionProc
(void* fileSpecHandlerObj, PDDoc pdDoc, PDAction pdAction);
```

Description

(*Optional*) Callback for **PDFileSpecHandler**. Launches a specified file. Called when the Acrobat viewer encounters a Launch (GoTo File) action. If this callback is **NULL**, no launch action is performed.

Parameters

fileSpecHandlerObj	The registered **PDFileSpecHandler**.
pdDoc	The document containing the Launch action.
pdAction	The action dictionary.

Return Value

true if the handler can do the Launch, **false** otherwise.

Header File

PDExpt.h

Related Callbacks

None

PDPageStmImageDataProc

```
ACCB1 ASBool ACCB2 PDPageStmImageDataProc (ASUns8* data,
ASSize_t dataLen, void* clientData);
```

Description

Callback for **PDPageStmGetInlineImage**. Should be called when inline image data is encountered in **PDPageStmGetToken**. This method may be called multiple times for one inline image. If so, each call provides sequential data for the image.

Parameters

data	The image data read so far.
dataLen	Length of **data**, in bytes.
clientData	User-supplied data that was passed in the call to **PDPageStmGetInlineImage** (which may have been passed in the **PDPageStmGetToken** method).

Return Value

true to continue reading the image's data, **false** to stop reading.

Header File

PDExpt.h

Related Methods

PDPageStmGetInlineImage
PDPageStmGetToken

PDPageStmStringOverflowProc

```
ACCB1 void ACCB2 PDPageStmStringOverflowProc (char* sVal,
ASSize_t sValLen, void* clientData);
```

Description

Callback used by **PDPageStmGetToken**. It is called when the length of a string token exceeds **kPDPageStmStringMax** bytes (see PDExpT.h) in **PDPageStmGetToken**.

Parameters

sVal	The string value read so far.
sValLen	Length of **sVal**, in bytes.
clientData	User-supplied data that was passed in the call to **PDPageStmGetToken**.

Return Value

None

Header File

PDExpt.h

Related Methods

PDPageStmGetToken

PDPathClosePathProc

```
ACCB1 ASBool ACCB2 PDPathClosePathProc (void* clientData);
```

Description

Callback for **PDPathEnumMonitor**. Called for every path closing operator.

Parameters

clientData	User-supplied data that was passed in the call to **PDPathEnum**.

Return Value

true to continue enumeration, **false** to halt enumeration.

Header File

PDExpT.h

Related Methods

PDPathEnum

PDPathCurveToProc

```
ACCB1 ASBool ACCB2 PDPathCurveToProc (ASFixedPoint* p1,
ASFixedPoint* p2, ASFixedPoint* p3, void* clientData);
```

Description

Callback for **PDPathEnumMonitor**. Called for every **c** operator.

Parameters

p1, p2, p3	The three points needed to specify the curve.
clientData	User-supplied data that was passed in the call to **PDPathEnum**.

Return Value

true to continue enumeration, **false** to halt enumeration.

Header File

PDExpT.h

Related Methods

PDPathEnum

PDPathLineToProc

```
ACCB1 ASBool ACCB2 PDPathLineToProc (ASFixedPoint* p1,
void* clientData);
```

Description

Callback for **PDPathEnumMonitor**. Called for every **l** operator.

Parameters

p1	The one point needed to specify the line's ending point.
clientData	User-supplied data that was passed in the call to **PDPathEnum**.

Return Value

true to continue enumeration, **false** to halt enumeration.

Header File

PDExpT.h

Related Methods

PDPathEnum

PDPathMoveToProc

```
ACCB1 ASBool ACCB2 PDPathMoveToProc (ASFixedPoint* p1,
void* clientData);
```

Description

Callback for **PDPathEnumMonitor**. Called for every **m** operator.

Parameters

p1	The one point needed to specify the location to move to.
clientData	User-supplied data that was passed in the call to **PDPathEnum**.

Return Value

true to continue enumeration, **false** to halt enumeration.

Header File

PDExpT.h

Related Methods

PDPathEnum

PDPathRectProc

```
ACCB1 ASBool ACCB2 PDPathRectProc (ASFixedPoint* p1,
ASFixedPoint* p2, void* clientData);
```

Description

Callback for **PDPathEnumMonitor**. Called for every **re** operator.

Parameters

p1, p2	The two points needed to specify the rectangle.
clientData	User-supplied data that was passed in the call to **PDPathEnum**.

Return Value

true to continue enumeration, **false** to halt enumeration.

Header File

PDExpT.h

Related Methods

PDPathEnum

PDPathVCurveToProc

```
ACCB1 ASBool ACCB2 PDPathVCurveToProc (ASFixedPoint* p1,
ASFixedPoint* p2, void* clientData);
```

Description

Callback for **PDPathEnumMonitor**. Called for every **v** operator.

Parameters

p1, p2	The two points needed to specify the curve.
clientData	User-supplied data that was passed in the call to **PDPathEnum**.

Return Value

true to continue enumeration, **false** to halt enumeration.

Header File

PDExpT.h

Related Methods

PDPathEnum

PDPathYCurveToProc

```
ACCB1 ASBool ACCB2 PDPathYCurveToProc (ASFixedPoint* p1,
ASFixedPoint* p2, void* clientData);
```

Description

Callback for **PDPathEnumMonitor**. Called for every **y** operator.

Parameters

p1, p2	The two points needed to specify the curve.
clientData	User-supplied data passed in the call to **PDPathEnum**.

Return Value

true to continue enumeration, **false** to halt enumeration.

Header File

PDExpT.h

Related Methods

PDPathEnum

PDResourceEnumColorSpaceProc

```
ACCB1 ASBool ACCB2 PDResourceEnumColorSpaceProc (char* name,
CosObj colorSpace, void* clientData);
```

Description

Callback for **PDResourceEnumMonitor**. It is called for color space resources.

Parameters

name	Color space name.
colorSpace	The name of the color space as it appears in the Resources dictionary.
clientData	User-supplied data that was passed in the call to **PDFormEnumResources**.

Return Value

true to continue enumeration, **false** to halt enumeration.

Header File

PDExpT.h

Related Methods

PDFormEnumResources

PDResourceEnumFontProc

```
ACCB1 ASBool ACCB2 PDResourceEnumFontProc (PDFont font,
char* name, void* clientData);
```

Description

Callback for **PDResourceEnumMonitor**. Procedure called for font resources.

Parameters

font	The font.
name	The name of the font as it appears in the Resources dictionary.
clientData	User-supplied data that was passed in the call to **PDFormEnumResources**.

Return Value

true to continue enumeration, **false** to halt enumeration.

Header File

PDExpT.h

Related Methods

PDFormEnumResources

PDResourceEnumProcSetProc

```
ACCB1 ASBool ACCB2 PDResourceEnumProcSetProc (char* name,
void* clientData);
```

Description

Callback for **PDResourceEnumMonitor**. Procedure called for **ProcSet** resources.

Parameters

name	The name of the **ProcSet** as it appears in the Resources dictionary.
clientData	User-supplied data that was passed in the call to **PDFormEnumResources**.

Return Value

true to continue enumeration, **false** to halt enumeration.

Header File

PDExpT.h

Related Methods

PDFormEnumResources

PDResourceEnumXObjectProc

```
ACCB1 ASBool ACCB2 PDResourceEnumXObjectProc
(PDXObject xObject, char* name, void* clientData);
```

Description

Callback for **PDResourceEnumMonitor**. Procedure called for **XObject** resources.

Parameters

xObject	The **XObject**.
name	The name of the **XObject** as it appears in the Resources dictionary.
clientData	User-supplied data that was passed in the call to **PDFormEnumResources**.

Return Value

true to continue enumeration, **false** to halt enumeration.

Header File

PDExpT.h

Related Methods

PDFormEnumResources

PDStringEnumProc

```
ACCB1 ASBool ACCB2 PDStringEnumProc (PDFont font,
char* string, ASInt32 stringLen, ASFixed delta,
void* clientData);
```

Description

Callback for **PDTextEnum**. Called once for each string in a text object.

Parameters

font	The font used for **string**.
string	The string. This string may be converted using **PDFontXlateToHost** or **PDFontXlateToUCS**.
stringLen	The number of bytes in **string**.
delta	The difference, in thousandths of an EM, from the end of the previous string to the beginning of the current string. (An EM is a typographic unit of measurement equal to the size of a font. For example, in a 12-point font, an EM is 12 points.) See the description of the **TJ** operator in Section 5.3.2 in the *PDF Reference*.
clientData	User-supplied data that was passed in the call to **PDTextEnum**.

Return Value

true to continue enumeration, **false** to halt enumeration.

Header File

PDExpT.h

Related Methods

PDTextEnum

PDSysFontEnumProc

```
ACCB1 ASBool ACCB2 PDSysFontEnumProc (PDSysFont sysFont,
void* clientData);
```

Description

Callback for **PDEnumSysFonts**. It is called once for each system font.

Parameters

sysFont	The system font.
clientData	User-supplied data that was specified in the call to **PDEnumSysFonts**.

Return Value

true to continue enumeration, **false** to halt enumeration.

Header File

PSFExpT.h

Related Methods

PDEnumSysFonts

PDTextSelectEnumQuadProc

```
ACCB1 ASBool ACCB2 PDTextSelectEnumQuadProc (void* procObj,
ASInt32 page, ASFixedQuad* quad);
```

Description

Callback for **PDTextSelectEnumQuads**. Called once for each quad in a text selection.

Parameters

procObj	User-supplied data that was passed in the call to **PDTextSelectEnumQuads**.
page	The page on which the text selection is located.
quad	The quad being enumerated.

Return Value

true to continue enumeration, **false** to halt enumeration.

Header File

PDExpT.h

Related Methods

PDTextSelectEnumQuads

PDTextSelectEnumTextProc

```
ACCB1 ASBool ACCB2 PDTextSelectEnumTextProc (void* procObj,
PDFont font, ASFixed size, PDColorValue color, char* text,
ASInt32 textLen);
```

Description

Callback for **PDTextSelectEnumText** and **PDTextSelectEnumTextUCS**. Called once for each text run (text in the same font, size, color, and on the same line) in a text selection.

Parameters

procObj	User-supplied data that was passed in the call to **PDTextSelectEnumText** or **PDTextSelectEnumTextUCS**.
font	The text's font.
size	The text's size, in points.
color	The text's color.
text	The text in the current run. NOTE: This string is not necessarily null-terminated.
textLen	The number of bytes in **text**.

Return Value

true to continue enumeration, **false** to halt enumeration.

Header File

PDExpT.h

Related Methods

PDTextSelectEnumText
PDTextSelectEnumTextUCS

PDThumbCreationDrawThumbProc

```
ACCB1 void ACCB2 PDThumbCreationDrawThumbProc (PDThumb thumb,
void* clientData);
```

Description

(Optional) Callback for **PDThumbCreationServer**. Called after **PDThumbCreationGetThumbDataProc** and after a **PDThumb** has been created. Gives the server a chance to draw the thumbnail image in a status window. May be **NULL**.

Parameters

thumb	The thumbnail image to draw.
clientData	User-supplied data that was passed in the call to **PDDocCreateThumbs**.

Return Value

None

Header File

PDExpT.h

Related Callbacks

PDThumbCreationGetThumbDataProc

Related Methods

PDDocCreateThumbs

PDThumbCreationGetThumbDataProc

```
ACCB1 ASBool ACCB2 PDThumbCreationGetThumbDataProc
(PDPage page, ASFixed thumbScale, ASInt32 width,
ASInt32 height, void* thumbData, void* clientData);
```

Description

(Optional) Callback for **PDThumbCreationServer**. Called for each page that does not currently contain a thumbnail image. May be **NULL**. If it is **NULL**, the thumbnail data is generated by the default thumbnail generator.

Parameters

page	The page for which to create a thumbnail image.
thumbScale	The scale to map from the page size to the thumbnail size—the thumbnail size is either 1/8 of the page size, or is limited to **MAX_THUMBPAGE_WIDTH** and **MAX_THUMBPAGE_HEIGHT**, whichever is smaller.
width	The width of the thumbnail image to create.
height	The height of the thumbnail image to create.
thumbData	A buffer into which the thumbnail data is copied. This buffer has the size: **rowBytes** = (**width** * **bitsPerPixel** + 7) / 8; **size** = **rowBytes** * **height**; where **bitsPerPixel** is specified as **numComponents** x **bitsPerComponent**. **numComponents** is dependent upon the color space. For **DeviceRGB**, **numComponents** is 3. For an indexed color space, **numComponents** is 1.
clientData	User-supplied data that was passed in the call to **PDDocCreateThumbs**.

Return Value

true to continue thumbnail image creation, **false** to halt thumbnail image creation.

Header File

PDExpT.h

Related Methods

PDDocCreateThumbs

PDThumbCreationNotifyPageProc

```
ACCB1 ASBool ACCB2 PDThumbCreationNotifyPageProc
(ASInt32 pageNum, void* clientData);
```

Description

(Optional) Callback for **PDThumbCreationServer**. Called before processing each page. May be **NULL**.

Parameters

pageNum	The page for which to create a thumbnail image.
clientData	User-supplied data that was passed in the call to **PDDocCreateThumbs**.

Return Value

true to continue thumbnail image creation, **false** to halt thumbnail image creation.

Header File

PDExpT.h

Related Methods

PDDocCreateThumbs

PDWordProc

```
ACCB1 ASBool ACCB2 PDWordProc (PDWordFinder wObj,
PDWord wInfo, ASInt32 pgNum, void* clientData);
```

Description

Callback for **PDWordFinderEnumWords**. Called once for each word.

Parameters

wObj	The word finder.
wInfo	The current word in the enumeration.
pgNum	The page number on which **wInfo** is located.
clientData	User-supplied data that was passed in the call to **PDWordFinderEnumWords**.

Return Value

true to continue enumeration, **false** to halt enumeration.

Header File

PDExpT.h

Related Methods

PDWordFinderEnumWords

PDXObjectFilterEnumProc

```
ACCB1 ASBool ACCB2 PDXObjectFilterEnumProc (char* filter,
CosObj decodeParms, void* clientData);
```

Description

Callback for **PDXObjectEnumFilters**. Called once for each filter that has been applied to an **XObject**'s data.

Parameters

filter	The filter's name.
decodeParms	The dictionary Cos object containing the filter's decode parameters.
clientData	User-supplied data that was passed in the call to **PDXObjectEnumFilters**.

Return Value

true to continue enumeration, **false** to halt enumeration.

Header File

PDExpT.h

Related Methods

PDXObjectEnumFilters

PIExportHFTsProcType

```
ACCB1 ASBool ACCB2 PIExportHFTsProcType (void);
```

Description

(Optional) Callback for **PIHandshake**. This handshaking function is called by the viewer during initialization to allow a plug-in to export one or more HFTs to other plug-ins.

This function should not do anything other than export HFTs. Plug-ins should not change the user interface at this time, for instance; do that in the **PIInitProcType** callback.

If this callback returns **false**, the **PIUnloadProcType** callback is called. The plug-in *must* remove and release *all* menu items and other user interface elements, HFTs, HFTServers, release any memory or any other resources allocated, and so on, in its **PIUnloadProcType** callback.

Parameters

None

Return Value

true if the HFT was exported successfully, **false** otherwise.

Header File

PIVersn.h

Related Callbacks

PIHandshake
PIImportReplaceAndRegisterProcType

Related Methods

None

PIHandshake

```
ACCB1 ASBool ACCB2 PIHandshake (ASUns32 handshakeVersion,
void* handshakeData);
```

Description

This handshaking function is called by the viewer after a plug-in is loaded into memory. The plug-in should fill out **handshakeData** to tell the viewer its name and how to call it back to export an HFT, import an HFT, perform initialization, and perform any sort of cleanup needed when the plug-in unloads.

This function should not do anything other than set up these callbacks. Plug-ins should not change the user interface at this time, for instance; do that in the **PIInitProcType** callback.

Every plug-in must provide this function.

Parameters

handshakeVersion	Version of the **handshakeData** structure.
handshakeData	Data indicating the plug-in's name and lifecycle callbacks for initialization and termination. Corresponds to **PIHandshakeData_V0200**.

Return Value

true if the handshake version number is valid, **false** if the handshake version number is unknown. If **false**, the plug-in is not initialized, and any capability it would add is not available.

Header File

PICommon.h

Related Callbacks

PIExportHFTsProcType
PIImportReplaceAndRegisterProcType
PIInitProcType
PIUnloadProcType

Related Methods

None

PIImportReplaceAndRegisterProcType

```
ACCB1 ASBool ACCB2 PIImportReplaceAndRegisterProcType (void);
```

Description

(Optional) Callback for **PIHandshake**. This handshaking function is called by the viewer during initialization to allow a plug-in to import an HFT to another plug-in, replace an API method, or register for a notification.

This is the *only* place that a plug-in may replace a function. You may call utility functions, but do not attempt to use Cos, PDModel or AcroView-level methods here. Plug-ins should not change the user interface at this time, for instance; do that in the **PIInitProcType** callback.

If this callback returns **false**, the **PIUnloadProcType** callback is called. The plug-in *must* remove and release *all* menu items and other user interface elements, HFT's, HFTServers, release any memory or any other resources allocated, and so on, in its **PIUnloadProcType** callback.

Parameters

None

Return Value

true if the HFT was imported successfully, **false** otherwise.

Header File

PIVersn.h

Related Callbacks

PIExportHFTsProcType
PIHandshake

Related Methods

None

PIInitProcType

```
ACCB1 ASBool ACCB2 PIInitProcType (void);
```

Description

(Required) Callback for **PIHandshake**. This handshaking function is called by the viewer during initialization to allow a plug-in to do any sort of initialization it requires, such as adding user interface elements like menu items.

It is *not* safe to assume that all other plug-ins have initialized at this point.

If you want to do something after *all* plug-ins have been loaded and after the user has dismissed the open file dialog (if any), register for the notification **AVAppDidInitialize** and perform the action in the callback you register. Or register for an idle proc with **AVAppRegisterIdleProc** and perform the action in the callback you register. An example of such a case is adding a menu item to a menu or submenu added by another plug-in.

If this callback returns **false**, the **PIUnloadProcType** callback is called. The plug-in *must* remove and release *all* menu items and other user interface elements, HFT's, HFTServers, release any memory or any other resources allocated, and so on, in its **PIUnloadProcType** callback.

Parameters

None

Return Value

true if the plug-in initialized successfully, **false** otherwise.

Header File

PIVersn.h

Related Callbacks

PIHandshake

Related Methods

None

PIUnloadProcType

```
ACCB1 ASBool ACCB2 PIUnloadProcType (void);
```

Description

(Optional) Callback for **PIHandshake**. This handshaking function is called by the viewer when the plug-in unloads to allow it to perform any sort of cleanup needed. Use this routine to release any system resources you may have allocated.

This is called for every plug-in when the viewer terminates or when any of the other **PIHandshake** callbacks return **false**.

The plug-in *must* remove and release *all* menu items and other user interface elements, HFT's, HFTServers, release any memory or any other resources allocated, and so on, in its **PIUnloadProcType** callback.

Parameters

None

Return Value

true if the plug-in finished its cleanup successfully, **false** otherwise.

Header File

PIVersn.h

Related Callbacks

PIHandshake

Related Methods

None

PMBeginOperationProc

```
ACCB1 void ACCB2 PMBeginOperationProc (void* clientData);
```

Description

Callback used in **ProgressMonitor**. Initialize the progress monitor and displays it with a current value of zero. This method must be called first when the progress monitor is used.

Parameters

clientData	User-supplied data that was passed in the call to whatever API method required the progress monitor.

Return Value

None

Header File

ASExpT.h

Related Callbacks

PMEndOperationProc

PMEndOperationProc

```
ACCB1 void ACCB2 PMEndOperationProc (void* clientData);
```

Description

Callback used in **ProgressMonitor**. Draws the progress monitor with its current value set to the progress monitor's duration (a full progress monitor), then removes the progress monitor from the display.

Parameters

clientData	User-supplied data that was passed in the call to whatever API method required the progress monitor.

Return Value

None

Header File

ASExpT.h

Related Callbacks

PMBeginOperationProc

PMGetCurrValueProc

```
ACCB1 ASInt32 ACCB2 PMGetCurrValueProc (void* clientData);
```

Description

Callback used in **ProgressMonitor**. Gets the progress monitor's duration, set by the most recent call the progress monitor's **PMSetCurrValueProc**.

Parameters

clientData	User-supplied data that was passed in the call to whatever API method required the progress monitor.

Return Value

None

Header File

ASExpT.h

Related Callbacks

PMSetCurrValueProc

PMGetDurationProc

```
ACCB1 ASInt32 ACCB2 PMGetDurationProc (void* clientData);
```

Description

Callback used in **ProgressMonitor**. Gets the progress monitor's duration, set by the most recent call the progress monitor's **PMSetDurationProc**.

Parameters

clientData	User-supplied data that was passed in the call to whatever API method required the progress monitor.

Return Value

The progress monitor's maximum value.

Header File

ASExpT.h

Related Callbacks

PMSetDurationProc

PMSetCurrValueProc

```
ACCB1 void ACCB2 PMSetCurrValueProc (ASInt32 currValue,
void* clientData);
```

Description

Callback used in **ProgressMonitor**. Sets the current value of the progress monitor and updates the display. The allowed value ranges from 0 (empty) to the value passed to **setDuration**. For example, if the progress monitor's duration is 10, the current value must be between 0 and 10, inclusive.

Parameters

currValue	The progress monitor's current value.
clientData	User-supplied data that was passed in the call to whatever API method required the progress monitor.

Return Value

None

Header File

ASExpT.h

Related Callbacks

PMGetCurrValueProc

PMSetDurationProc

```
ACCB1 void ACCB2 PMSetDurationProc (ASInt32 duration,
void* clientData);
```

Description

Callback used in **ProgressMonitor**. Sets the value that corresponds to a full progress monitor display. The progress monitor is subsequently filled in by setting its current value. This method must be called before you can set the progress monitor's current value.

Parameters

duration	The maximum value the progress monitor will be allowed to have.
clientData	User-supplied data that was passed in the call to whatever API method required the progress monitor.

Return Value

None

Header File

ASExpT.h

Related Callbacks

PMGetDurationProc

PMSetTextProc

```
ACCB1 void ACCB2 PMSetTextProc (ASText text,
void* clientData);
```

Description

Callback within **ASProgressMonitorRec** that sets the text string that is displayed by the progress monitor.

The built-in document progress monitor (see **AVAppGetDocProgressMonitor**) makes a copy of **text**. As such, it is the client's responsibility to destroy it.

Parameters

text	The string to display.
clientData	A pointer to the data associated with the progress monitor (which should be passed to you with the progress monitor).

Return Value

None

Header File

ASExpT.h

Related Callbacks

None

Declarations

ASCabEntryRec

```
typedef struct _t_ASCabEntryRec {
    const char * keyName;
    ASCabValueType type;
    ASInt32 intVal;
    const void * ptrVal;
    double doubleVal;
} ASCabEntryRec;
```

Description

Data structure representing a cabinet entry. The first entry in each descriptor specifies the name of the key; the second field contains the type; the following fields contain the values. The entry list must end with a descriptor containing **NULL** for the key name. It can be used as shown below to construct an **ASCab**:

```
ASCabEntryRec cabData[] = {{"key1", kASValueInteger, 1},
                           {"key2", kASValueInteger, -1},
                           {"key3", kASValueBool, false},
                           {NULL}};

ASCab CreateDefaultCab()
{
    return ASCabFromEntryList (cabData);
}
```

NOTE: The above example uses just three values for each record. However, more may be required—e.g.:

For a double: **{"keyDouble", kASValueDouble, 0, NULL, doub}**

For a string: **{"keyString", kASValueString, 0, (void*)string}**

Header File

ASExtraExpT.h

Related Callbacks

None

Related Methods

ASCabFromEntryList

Members

keyName	The name of the key.
type	The supported **ASCabValueTypes** are: **kASValueBool**—**intVal** contains the value. **kASValueInteger**—**intVal** contains the value. **kASValueAtom**—**intVal** contains the value. **kASValueDouble**—**doubleVal** contains the value. **kASValueString**—**ptrVal** points to a null-terminated C string. **kASValueText**—**ptrVal** points to a null-terminated string containing script text, **intVal** specifies the **ASScript** code for the text. **kASValueBinary**—**ptrVal** points to the binary data, **intVal** specifies the size of the data. **kASValueNull**—Creates an entry with a **NULL** value. No other types are supported (specifically **kASValueCabinet** and **kASValuePointer**). You can build nested cabinets using the "**key:key**" syntax for the **keyNames**.
intVal	See above.
ptrVal	See above.
doubleVal	See above.

ASCabMungeAction

```
typedef ASEnum16 ASCabMungeAction;
enum {
    kASMungeRemove,
    kASMungeRemoveUnknown,
    kASMungeRemoveDefaults,
    kASMungeRemoveBadValues,
    kASMungeCopy,
    kASMungeReplace,
    kASMungeCopyMissing,
    kASMungeRemoveNulls
};
```

Description

A value that determines the actions to be taken when **ASCabMunge** is called. **keyCab** is the **ASCab** that provides the keys determining how **theCab** is to be changed. During an **ASCabMunge** operation the key cab will not be altered.

Header File

ASExtraExpT.h

Related Callbacks

None

Related Methods

ASCabMunge

Members

kASMungeRemove	Any keys in **keyCab** are removed from **theCab** and their values destroyed.
kASMungeRemoveUnknown	Any keys in **theCab** which aren't also in **keyCab** are removed and their values destroyed.
kASMungeRemoveDefaults	Any keys in **keyCab** which are also in **theCab** and have the same value in **theCab** are removed and their values destroyed.
kASMungeRemoveBadValues	Any keys in **theCab** which are also in **keyCab** but have different values are removed and their values destroyed.
kASMungeCopy	All key/value pairs in **keyCab** are copied into **theCab**, possibly overwriting existing key/value pairs in **theCab**.

kASMungeReplace	Any keys in **theCab** which are also in **keyCab** have their values replaced with copies of the values in **keyCab**.
kASMungeCopyMissing	Any keys in **keyCab** which are not in **theCab** are copied over to **theCab**, along with the corresponding values.
kASMungeRemoveNulls	Any keys in **keyCab** with a type of **kASValueNull** are removed from **theCab**, along with their corresponding values.

ASCabValueType

```
typedef ASEnum16 ASCabValueType;
enum {
    kASValueBool,
    kASValueInteger,
    kASValueAtom,
    kASValueDouble,
    kASValueString,
    kASValueText,
    kASValueBinary,
    kASValuePointer,
    kASValueCabinet,
    kASValueNull,
    kASValueUnknown= -1
};
```

Description

ASCabs can be used to store arbitrary key/value pairs. The keys are always null-terminated strings containing only low-ASCII alphanumeric characters. The various types of values are enumerated here.

Header File

ASExtraExpT.h

Related Callbacks

None

Related Methods

ASCabFromEntryList
ASCabGetType

Members

kASValueBool	An **ASBool**.
kASValueInteger	An **ASInt32**.
kASValueAtom	An **ASAtom**.
kASValueDouble	A double-precision floating point number.
kASValueString	A null-terminated, un-encoded string.
kASValueText	An **ASText** object.
kASValueBinary	A binary blob of any size.

kASValuePointer	A pointer to something outside the cabinet.
kASValueCabinet	Another cabinet.
kASValueNull	Key exists but has no useful value—that is, a placeholder.
kASValueUnknown	An invalid type.

ASFile Flags

Description

Flags to describe file transfers. Set by external file systems.

Header File

ASExpT.h

Related Methods

ASFileSysOpenFile

Mode	Description
kASFileSlowTransfer	Set if the file's data transfer rate is generally slow, for example, because it is on a floppy disk or being accessed via modem.
kASFileSlowConnect	Initiating each access to the file is slow, for example, because the file is being served by an HTTP server that spawns a new process for each request.
kASFileUseMRead	Use multi-read commands to access the file.
kASFileDialUp	*(New for Acrobat 5.0)* Set if media/access is a dial up connection. This flag is only fully implemented on Windows. On the Macintosh, this flag is always conservatively set to **true**.

ASFileMode Flags

Description

Flags to describe file modes.

Header File

ASExpT.h

Related Methods

ASFileRead
ASFileSetMode

Mode	Description
kASFileModeDoNotYieldIfBytesNotReady	If set, then **ASFileRead** does *not* yield if bytes are not ready (which raises the **fileErrBytesNotReady** exception).

ASFile Open Modes

Description

File access modes used to specify how a file can be used when it is open. Not all modes can be specified individually; **ASFILE_CREATE** can be used only in conjunction with **ASFILE_READ or ASFILE_WRITE**. In addition, it is acceptable to specify **ASFILE_READ** and **ASFILE_WRITE** together, by OR-ing the two constants.

ASFILE_SERIAL and **ASFILE_LOCAL** (present only in version 3.0 or later) are hints that help the Acrobat viewer optimize access to the file; they must be OR-ed with one or more of the other constants.

Header File

ASExpT.h

Related Methods

ASFileSysOpenFile
ASFileReopen

Mode	Description
ASFILE_READ	Open the file for reading.
ASFILE_WRITE	Open the file for writing.
ASFILE_CREATE	Create the file if it does not exist.
ASFILE_SERIAL	A hint indicating that the file will be accessed sequentially.
ASFILE_LOCAL	A hint indicating that a local copy of the file will be needed.

ASFileStatus Flags

Description

Values returned by **ASFileSysGetStatusProc**.

Header File

ASExpT.h

Related Methods

ASFileRead

Mode	Description
kASFileOkay	The **MDFile** is in a valid state.
kASFileTerminating	The **MDFile** is being closed, for example, because the file is being displayed in a Web browser's window and the user canceled downloading.

ASFileSysItemProps

ASFileSysItemPropsRec

```
typedef struct _t_ASFileSysItemProps {
    ASSize_t size;
    ASBool isThere;
    ASFileSysItemType type;
    ASBool isHidden;
    ASBool isReadOnly;
    ASBool creationDateKnown;
    ASTimeRec creationDate;
    ASBool modDateKnown;
    ASTimeRec modDate;
    ASUns32 fileSize;
    ASUns32 fileSizeHigh;
    ASInt32 folderSize;
    ASUns32 creatorCode;
    ASUns32 typeCode;
} ASFileSysItemPropsRec, *ASFileSysItemProps;
```

Description

A list of properties for the object referenced by an **ASPathName**. Used in **ASFileSysGetItemProps** and the folder enumeration routines.

Header File

ASExpT.h

Related Callbacks

None

Related Methods

ASFileSysGetItemProps
ASFileSysFirstFolderItem
ASFileSysNextFolderItem

Members

size	Size of the data structure. Must be set to **sizeof(ASFileSysItemPropsRec)**.
isThere	**true** if the object exists. If **false** none of the following fields are valid.

type	One of the **ASFileSysItemTypes.**
isHidden	**true** if the object's hidden bit is set.
isReadOnly	**true** if the object is read only.
creationDateKnown	**true** if the file system could determine the creation date of the object.
creationDate	The creation date of the object. Valid only if **creationDateKnown** is **true**.
modDateKnown	**true** if the file system could determine the last modification date of the object.
modDate	The modification date of the object. Valid only if **modDateKnown** is **true**.
fileSize, fileSizeHigh	If **type** is **kASFileSysFile**, these two fields hold the size of the file in bytes as a 64-bit integer.
folderSize	If **type** is **kASFileSysFolder**, this field specifies how many items are in the folder. If this value is **-1** the file system was unable to easily determine the number of objects. You will need to explicitly enumerate the objects to determine how many are in the folder.
creatorCode	The Mac OS creator code for the file. For non-Mac OS file systems, this will be zero.
typeCode	The Mac OS type code for the file. For non-Mac OS file systems, this will be zero.

ASFileSysItemType

```
typedef ASEnum16 ASFileSysItemType;
enum {
    kASFileSysFile,
    kASFileSysFolder,
    kASFileSysUnknown = -1
};
```

Description

Enumerated data type used to categorize an object associated with an **ASPathName**.

Header File

ASExpT.h

Related Callbacks

ASFileSysGetItemPropsProc
ASFileSysFirstFolderItemProc
ASFileSysNextFolderItemProc

Related Methods

ASFileSysGetItemProps
ASFileSysFirstFolderItem
ASFileSysNextFolderItem

Members

kASFileSysFile	Object is associated with a file.
kASFileSysFolder	Object is associated with a folder.
kASFileSysUnknown	Object type is unknown.

ASFileSys

ASFileSysRec

```
typedef struct _t_ASFileSysRec *ASFileSys;
typedef struct _t_ASFileSysRec {
    ASSize_t size;
    ASFileSysOpenProc open;
    ASFileSysCloseProc close;
    ASFileSysFlushProc flush;
    ASFileSysSetPosProc setpos;
    ASFileSysGetPosProc getpos;
    ASFileSysSetEofProc seteof;
    ASFileSysGetEofProc geteof;
    ASFileSysReadProc read;
    ASFileSysWriteProc write;
    ASFileSysRemoveProc remove;
    ASFileSysRenameProc rename;
    ASFileSysIsSameFileProc isSameFile;
    ASFileSysGetNameProc getName;
    ASFileSysGetTempPathNameProc getTempPathName;
    ASFileSysCopyPathNameProc copyPathName;
    ASFileSysDiPathFromPathProc diPathFromPath;
    ASFileSysPathFromDIPathProc pathFromDIPath;
    ASFileSysDisposePathNameProc disposePathName;
    ASFileSysGetFileSysNameProc getFileSysName;
    ASFileSysGetStorageFreeSpaceProc getStorageFreeSpace;
    ASFileSysFlushVolumeProc flushVolume;
    /* The following are present in version 3.0 or later */
    ASFileSysGetFileFlags getFileFlags;
    ASFileSysAsyncReadProc readAsync;
    ASFileSysAsyncWriteProc writeAsync;
    ASFileSysAsyncAbortProc abortAsync;
    ASFileSysYieldProc yield;
    ASFileSysMReadRequestProc mreadRequest;
    ASFileSysGetStatusProc getStatus;
    ASFileSysCreatePathNameProc createPathName;
    ASFileSysAcquireFileSysPathProc acquireFileSysPath;
    ASFileSysClearOutstandingMReadsProc
clearOutstandingMReads;
    /* The following are present in version 5.0 or later */
    ASFileSysGetItemPropsProc getItemProps;
```

```
    ASFileSysFirstFolderItemProc firstFolderItem;
    ASFileSysNextFolderItemProc nextFolderItem;
    ASFileSysDestroyFolderIteratorProc destroyFolderIterator;
    ASFileSysSetModeProc setFileMode; /* do not use */
    ASFileSysURLFromPathProc urlFromPath;
    ASFileSysGetParentProc getParent;
    ASFileSysCreateFolderProc createFolder;
    ASFileSysRemoveFolderProc removeFolder;
    ASFileSysDisplayStringFromPathProc displayStringFromPath;
    ASFileSysSetTypeAndCreatorProc setTypeAndCreator;
    ASFileSysGetTypeAndCreatorProc getTypeAndCreator;
} ASFileSysRec;
```

Description

Data structure containing callbacks that implement a file system.

Header File

ASExpT.h

Related Methods

Numerous. See **ASFileSys**.

Members

size	Size of the data structure. Must be set to **sizeof(ASFileSysRec)**.

ASFixed

ASFixedP

```
typedef ASInt32 ASFixed, *ASFixedP;
```

Description

The **ASFixed** type is a 32-bit quantity representing a rational number with the high (low on little-endian machines) 16 bits representing the number's mantissa and the low (high) 16 bits representing the fractional part. The definition is platform-dependent.

ASFixedP is a pointer to an **ASFixed**.

Addition, subtraction, and negation with **ASFixed** types can be done with + and -, unless you care about overflow, in which case you should use **FixedSum** and **FixedDiff**.

Overflow in **ASFixed**-value operations is indicated by the values **fixedPositiveInfinity** and **fixedNegativeInfinity**.

Header Files

Platform-dependent

Related Methods

ASFixedDiv
ASFixedMatrixConcat
ASFixedMatrixInvert
ASFixedMatrixTransform
ASFixedMatrixTransformRect
ASFixedMul
ASFixedToCString

ASFixedMatrix

ASFixedMatrixP

```
typedef struct _t_FixedMatrix {
    ASFixed a;
    ASFixed b;
    ASFixed c;
    ASFixed d;
    ASFixed h;
    ASFixed v;
} ASFixedMatrix, *ASFixedMatrixP;
```

Description

Matrix containing fixed numbers.

Header File

ASExpT.h

Related Methods

Numerous

ASFixedPoint

ASFixedPointP

```
typedef struct _t_FixedPoint {
    ASFixed h;
    ASFixed v;
} ASFixedPoint, *ASFixedPointP;
```

Description

Point (in two-dimensional space) represented by two fixed numbers.

Header File

ASExpT.h

Related Methods

Numerous

ASFixedQuad

ASFixedQuadP

```
typedef struct _t_ASFixedQuad {
    ASFixedPoint tl, tr, bl, br;
} ASFixedQuad, *ASFixedQuadP;
```

Description

Quadrilateral represented by four fixed points (one at each corner). In the Acrobat viewer, a quadrilateral differs from a rectangle in that the latter must always have horizontal and vertical sides, and opposite sides must be parallel.

Header File

PDExpT.h

Related Methods

Numerous

ASFixedRect

ASFixedRectP

```
typedef struct _t_ASFixedRect {
    ASFixed left;
    ASFixed top;
    ASFixed right;
    ASFixed bottom;
} ASFixedRect, *ASFixedRectP;
```

Description

A rectangle represented by the coordinates of its four sides. In the Acrobat viewer, a rectangle differs from a quadrilateral in that the former must always have horizontal and vertical sides, and opposite sides must be parallel.

Header File

ASExpT.h

Related Methods

Numerous

ASFolderIterator

```
typedef struct _t_ASFolderIterator* ASFolderIterator;
```

Description

An opaque object used to iterate through the contents of a folder. **ASFileSysFirstFolderItem** returns the first item in the folder along with an **ASFolderIterator** object for iterating through the rest of the items in the folder. Call **ASFileSysNextFolderItem** with this object to return the next object in the folder until the routine returns **false**. To discard the **ASFolderIterator** object, call **ASFileSysDestroyFolderIterator**.

Header File

ASExpT.h

Related Callbacks

ASFileSysFirstFolderItemProc
ASFileSysNextFolderItemProc
ASFileSysDestroyFolderIteratorProc

Related Methods

ASFileSysFirstFolderItem
ASFileSysNextFolderItem
ASFileSysDestroyFolderIterator

ASHostEncoding

```
typedef ASInt32 ASHostEncoding;
```

Description

Integer specifying the host encoding for text. On the Mac OS, it is a script code. On Windows, it is a CHARSET id. On UNIX, Acrobat currently only supports English, so the only valid **ASHostEncoding** is **0** (Roman). See **ASScript**.

Header File

ASExtraExpT.h

Related Callbacks

None

Related Methods

Numerous

ASIORequest

```
typedef struct _t_ASIORequestRec {
    ASMDFile mdFile;
    void* ptr;
    ASInt32 offset;
    ASInt32 count;
    ASInt32 totalBytesCompleted;
    ASInt32 pError;
    void* clientData;
    ASIODoneProc IODoneProc;
    void* IODoneProcData;
} ASIORequestRec, *ASIORequest;
```

Description

Data structure representing an I/O request.

Header File

ASExpT.h

Related Callbacks

ASFileSysAsyncReadProc
ASFileSysAsyncWriteProc
ASIODoneProc

Members

mdFile	The **MDFile** corresponding to the **ASFile** this request is for.
ptr	Pointer to data to write to or read from **mdFile**.
offset	Offset (specified in bytes) into **mdFile** of the first byte to read or write.
count	Number of bytes to read/write. Must be filled in before **IODoneProc** is called. If zero, the read was either terminated or did not complete.
totalBytesCompleted	Number of bytes actually read or written.
pError	Error code. This code is filled by the **ASFileSys** before **IODoneProc** is called. If nonzero, the read was either terminated or did not complete.
clientData	User-supplied data that the **ASFileSys** can use for anything it wishes.

IODoneProc	User-supplied callback to call by the **ASFileSys** when the operation has completed. If non-**NULL**, it points to a procedure that *must* be called either when the request has terminated due to error or other condition, or when all of the bytes have been received for this request. **NOTE:** This callback may be called at interrupt time.
IODoneProcData	User-supplied that is available for **IODoneProc** to use.

ASMDFile

```
#define MDFile ASMDFile
typedef void *ASMDFile;
```

Description

NOTE: NOTE: **ASMDFile** replaces **MDFile**. **MDFile** is an obsolete name for this data type for backward compatibility.

An **MDFile** is an opaque representation of a file instance for a particular file system. File system implementors may choose any convenient representation for an **MDFile**; in particular, file systems need not worry about **MDFile**-space conflicts; the **ASFile** object exported by the common implementation is guaranteed to be unique across all open files, and the common implementation maps calls to **ASFile** methods to calls to **ASFileSystem** callbacks with the corresponding **MDFile**.

Header File

ASExpT.h

Methods affected by this name change

ASFileFromMDFile
ASFileGetMDFile

Structures affected by this name change

ASIORequest

Callbacks affected by this name change

ASFileSysAsyncAbortProc
ASFileSysGetFileFlags
ASFileSysYieldProc
ASFileSysMReadRequestProc
ASFileSysClearOutstandingMReadsProc
ASFileSysGetStatusProc
ASFileSysOpenProc
ASFileSysCloseProc
ASFileSysFlushProc
ASFileSysSetPosProc
ASFileSysGetPosProc
ASFileSysSetEofProc
ASFileSysGetEofProc
ASFileSysReadProc
ASFileSysWriteProc
ASFileSysRenameProc
ASFileSysIsSameFileProc

ASPlatformPrinterSpec

ASPlatformPrinterSpecRec

```
/* In Mac OS */
typedef struct _t_ASPlatformPrinterSpec
*ASPlatformPrinterSpec;
typedef struct _t_ASPlatformPrinterSpec {
    ASSize_t size;
    void* cGrafPtr;
    short hRes, vRes;
} ASPlatformPrinterSpecRec;

/* In UNIX */
typedef struct _t_ASPlatformPrinterSpec
*ASPlatformPrinterSpec;
typedef struct _t_ASPlatformPrinterSpec {
    ASSize_t size;
    char* printerName;
    ASUns8* baseAddr;
    ASUns32 rowBytes;
    ASUns32 depth;
    AVRect32 bounds;
} ASPlatformPrinterSpecRec;

/* In Windows */
#define kPrinterSpecNameLen 64 /* room for 32 Unicode chars */
typedef struct _t_ASPlatformPrinterSpec
*ASPlatformPrinterSpec;
typedef struct _t_ASPlatformPrinterSpec {
    ASSize_t size;
    char driverName[kPrinterSpecNameLen];
    char printerName[kPrinterSpecNameLen];
    char portName[kPrinterSpecNameLen];
    ASBool createMetaFile;
    char metaFileName[260];
    ASInt32 win16Hdc;
    ASInt32 hRes;
    ASInt32 vRes;
    ASInt32 colorDepth;
    ASBool isPostScript;
} ASPlatformPrinterSpecRec;
```

Description

Data structure representing a platform specification for a printer. Used in **AVDocPrintParams**.

Header File

AVExpT.h

Related Methods

AVDocPrintPagesWithParams

Members

For all platforms	
size	Size of the data structure. Must be set to **sizeof(ASPlatformPrinterSpecRec)**.

In Mac OS	
cGrafPtr	Port to print to.
hRes, vRes	Best known resolution of current printer.

In UNIX	
printerName	Print command, such as “lp -dMyPrinter -n4”. If **printerName** is **NULL**, a default print command is used. The Acrobat viewer’s built-in default is “lp” on most UNIX systems, and “lpr” on SunOS. This should print to the system’s default printer. Some UNIX systems also look at the environment variable **LPDEST** or **PRINTER**. See the documentation for your platform to determine whether or not this is the case.
baseAddr	Currently unused.
rowBytes	Currently unused.
depth	Currently unused.
bounds	Currently unused.

In Windows	
The following items should be provided for full, non-interactive printing.	
driverName	See Windows.h DEVNAMES for a description of these fields.

In Windows	
printerName	Name of the printer. For example, “HPPCL,” “HP LaserJet 4,” or “LPT1.”
portName	Port to print to.
For embedded printing, **createMetaFile**, **metaFileName**, **win16Hdc**, **hRes**, **vRes**, **colorDepth**, and **isPostScript** must be provided.	
createMetaFile	Must be **true** if Windows 32-bit platforms; optional for Windows 16-bit platforms.
metaFileName	Pathname for the metafile. Only required if **createMetaFile** is **true**.
win16Hdc	Device context for 16- or 32-bit platforms.
hRes	Horizontal resolution of printer; 300 dpi, for example.
vRes	Vertical resolution of printer; 300 dpi, for example.
colorDepth	Color depth of device; typically 1, 8, or 24. This determines the depth of images created for the printer. You may specify 24 when printing to a monochrome printer. The driver is expected to convert to the printer depth. Not used if **isPostScript** is **true**.
isPostScript	Set to **true** if printing to a PostScript printer.

ASPortRef

```
/* ASPortRef */
#if MAC_PLATFORM
typedef CGrafPtr ASPortRef;
#elif WIN_PLATFORM
typedef void* ASPortRef;
#elif UNIX_PLATFORM
typedef void* ASPortRef;
#endif
```

Description

Provides access to a port. **ASPortRef** is the same as a Windows HDC.

Header File

ASExpT.h

Related Methods

None

ASProgressMonitor

ASProgressMonitorRec

```
typedef struct _t_ProgressMonitor {
    ASSize_t size;
    PMBeginOperationProc beginOperation;
    PMEndOperationProc endOperation;
    PMSetDurationProc setDuration;
    PMSetCurrValueProc setCurrValue;
    PMGetDurationProc getDuration;
    PMGetCurrValueProc getCurrValue;
    PMSetTextProc setText;
} ASProgressMonitorRec, *ASProgressMonitor;
```

Description

This type replaces the **ProgressMonitorRec**.

Header File

AVExpT.h

Methods Affected by this Change

AVCommandGetProgressMonitor
AVAppGetDocProgressMonitor
PDDocImportCosDocNotes
PDDocExportNotes
PDDocImportNotes
PDDocCreateThumbs
PDDocDeleteThumbs
PDDocSave
PDDocDeletePages
PDDocInsertPages
PDDocReplacePages
PDDocEnumFonts

Structs Affected by this Change

ProgressMonitorRec
CosDocSaveParamsRec
PDDocSaveParamsRec
PDDocCopyParamsRec

ASReportType

```
typedef ASEnum16 ASReportType;
enum {
    kASReportNote,
    kASReportWarning,
    kASReportError
};
```

Description

Used in an **ASReportProc** to indicate what kind of information is being reported.

Header File

ASExtraExpT.h

Related Callbacks

ASReportProc

Related Methods

None

Members

kASReportNote	A note.
kASReportWarning	A warning.
kASReportError	An error.

ASScript

```
typedef ASInt32 ASScript;
enum {
    kASRomanScript,
    kASJapaneseScript,
    kASTraditionalChineseScript,
    kASKoreanScript,
    kASArabicScript,
    kASHebrewScript,
    kASGreekScript,
    kASCyrillicScript,
    kASRightLeftScript,
    kASDevanagariScript,
    kASGurmukhiScript,
    kASGujaratiScript,
    kASOriyaScript,
    kASBengaliScript,
    kASTamilScript,
    kASTeluguScript,
    kASKannadaScript,
    kASMalayalamScript,
    kASSinhaleseScript,
    kASBurmeseScript,
    kASKhmerScript,
    kASThaiScript,
    kASLaotianScript,
    kASGeorgianScript,
    kASArmenianScript,
    kASSimplifiedChineseScript,
    kASTibetanScript,
    kASMongolianScript,
    kASGeezScript,
    kASEastEuropeanRomanScript,
    kASVietnameseScript,
    kASExtendedArabicScript,
    kASEUnicodeScript,
    kASDontKnowScript = -1
};
```

Description

An enumeration of writing scripts. Not all of these scripts are supported on all platforms.

Header File

ASExpT.h

Related Callbacks

None

Related Methods

Numerous

ASTimeRec

ASTimeRecP

```
typedef struct _t_ASTimeRec {
    ASInt16 year;
    ASInt16 month;
    ASInt16 date;
    ASInt16 hour;
    ASInt16 minute;
    ASInt16 second;
    ASInt16 millisecond;
    ASInt16 day;
    ASInt16 gmtOffset;
} ASTimeRec, *ASTimeRecP;
```

Description

Time/Date structure.

The **millisecond** field is currently unused.

Header File

ASExpT.h

Related Methods

PDAnnotGetDate
PDAnnotSetDate

AS Types

Type	Size (bytes)	Description
ASBool	2	**unsigned short** with two values—true (1) or false (0)
ASUns8	1	**unsigned char**
ASUns16	2	**unsigned short**
ASUns32	4	**unsigned long**
ASInt8	1	**signed char**
ASInt16	2	**signed short**
ASInt32	4	**signed long**
AsEnum8	1	**enum** with 127 possible values
AsEnum16	2	**enum** with 327,676 possible values
ASFixed	4	See **ASFixed**
ASSize_t	4	Canonical type for sizes of objects in bytes (as in **size_t**)

Description

Types provided for platform independence.

Header File

CoreExpt.h

Related Methods

Numerous

ASUnicodeFormat

```
typedef ASEnum16 ASUnicodeFormat;
enum {
    kUTF16BigEndian,
    kUTF16HostEndian,
    kUTF8
};
```

Description

Describes the various Unicode formats you can pour into and read out of an **ASText** object.

Header File

ASExtraExpT.h

Related Callbacks

None

Related Methods

ASTextFromUnicode
ASTextFromSizedUnicode
ASTextSetUnicode
ASTextSetSizedUnicode
ASTextGetUnicodeCopy

Members

kUTF16BigEndian	Always returns the bytes in big-endian order.
kUTF16HostEndian	Returns the bytes in the host's native endian, whatever is natural for an **ASUns16**.
kUTF8	Endian neutral.

ASWindowRef

```
/* ASWindowRef */
#if MAC_PLATFORM
typedef WindowRef ASWindowRef;
#elif WIN_PLATFORM
typedef void* ASWindowRef;
#elif UNIX_PLATFORM
typedef void* ASWindowRef;
#endif
```

Description

A platform dependent window handle corresponding to a **WindowPtr** in Mac OS, an **HWND** in Windows and a **Widget** in Unix.

Header File

ASExpT.h

Related Methods

AVSweetPeaProcessADMEvent

AVAccessColorPolicy

```
typedef ASEnum8 AVAccessColorPolicy;
enum {
    kAVAccessUseDocumentColors,
    kAVAccessUseSystemColors,
    kAVAccessUsePreferenceColors
};
```

Description

Definitions specifying the manner in which the background and text colors are chosen when viewing a document.

Header File

AVExpT.h

Related Methods

AVAppSetPreference

Members

kAVAccessUseDocumentColors	Use the colors specified within the document.
kAVAccessUseSystemColors	Use the colors specified by the OS preferences.
kAVAccessUsePreferenceColors	Use the colors specified by the Acrobat preferences.

AVActionContext

AVActionContextRec

```
typedef struct _AVActionContextRec {
    ASSize_t size;
    CosObj co;
    ASAtom asaType;
    ASAtom asaKey;
} AVActionContextRec, *AVActionContext;
```

Description

This structure gives the action handler some context in terms of its execution. It specifies the "parent" object, which initiated the action, and the trigger type of the action. Trigger names should correspond to the key used in the **AA** dictionary of the file.

Header File

AVExpT.h

Related Callbacks

AVActionPerformExProc

Members

size	Size of this record. **context.size=sizeof(AVActionContextRec)**.
co	Object that is performing the action—e.g., bookmark or annotation.
asaType	Type of the object, using these **define**s: **#define AVTRIGGERTYPE_DOC ASAtomFromString("Doc")** **#define AVTRIGGERTYPE_DEST ASAtomFromString("Dest")** **#define AVTRIGGERTYPE_PAGE ASAtomFromString("Page")** **#define AVTRIGGERTYPE_LINK ASAtomFromString("Link")** **#define AVTRIGGERTYPE_ANNOT ASAtomFromString("Annot")** **#define AVTRIGGERTYPE_BOOKMARK ASAtomFromString("Bookmark")**
asaKey	Trigger name for the object, using these **define**s: **#define AVTRIGGER_MOUSEUP ASAtomFromString("Mouse Up")** **#define AVTRIGGER_OPEN ASAtomFromString("Open")** **#define AVTRIGGER_CLOSE ASAtomFromString("Close")**

AVActionHandlerProcs

```
typedef struct _t_AVActionHandlerProcs {
    ASSize_t size;
    AVActionPerformProc Perform;
    AVActionDoPropertiesProc DoProperties;
    AVActionFillActionDictProc FillActionDict;
    AVActionGetInstructionsProc GetInstructions;
    AVActionGetButtonTextProc GetButtonText;
    AVActionGetStringOneTextProc GetStringOneText;
    AVActionGetStringTwoTextProc GetStringTwoText;
    /* New for Acrobat 3.01 */
    AVActionCopyProc Copy;
} AVActionHandlerProcsRec, *AVActionHandlerProcs;
```

Description

Data structure containing callbacks that implement an action handler. The callbacks implement the action handler functions. For example, display user interface text, request the action's properties from the user, perform the action.

Header File

AVExpT.h

Related Methods

AVAppRegisterActionHandler
AVActionHandlerGetProcs
AVDocCopyAction

Members

size	Size of the data structure. Must be set to **sizeof(AVActionHandlerProcsRec)**.

AVAlertButtonInfo

```
typedef struct AVAlertButtonInfo {
    ASBool show;
    ASText title;
} AVAlertButtonInfo;
```

Description

Data structure containing information about a button used in an Alert dialog.

Header File

AVExpT.h

Related Methods

AVAlertWithParams

Members

show	Pass **true** to show the button.
title	If non-**NULL** this text is used as the button caption, otherwise the default is used. The default values for **button1**, **button2** and **button3** are “OK”, “Cancel”, and “” respectively.

AVAlertCheckBoxInfo

```
typedef struct AVAlertCheckBoxInfo {
    ASBool show;
    ASText title;
    ASBool value;
} AVAlertCheckBoxInfo;
```

Description

Data structure containing information about a checkbox used in an Alert dialog.

Header File

AVExpT.h

Related Methods

AVAlertWithParams

Members

show	Pass **true** to show the button.
title	If non-**NULL** this text is used as the checkbox caption, otherwise the default is used. The default value for the checkbox is “Do not show this message again”.
value	Pass **true** to initially check the box. The chosen value is returned in this parameter.

AVAlert Icons

Description

Standard icons used in alert boxes.

Header File

AVExpT.h

Related Methods

AVAlert
AVAlertConfirm
AVAlertNote

Icon Type	Icon Displayed (Windows)	Icon Displayed (Macintosh)
ALERT_NOICON	None.	None.
ALERT_CAUTION		
ALERT_NOTE		
ALERT_QUESTION		
ALERT_STOP		

NOTE: The **AVAlert** method displays the **ALERT_QUESTION** icon when the **ALERT_NOTE** constant is specified. Because of this, **AVAlertNote** displays the **ALERT_QUESTION** icon.

NOTE: The **ALERT_QUESTION** value is not recognized by AVAlert(). It can only be used with the **AVAlertWithParams** method.

AVAlertParams

AVAlertParamsRec

```
typedef struct _t_AVAlertParams {
    ASSize_t size;
    AVDoc parentDoc;
    ASText windowTitle;
    ASInt32 iconType;
    ASText message;
    ASBool beep;
    AVAlertButtonInfo button1;
    AVAlertButtonInfo button2;
    AVAlertButtonInfo button3;
    AVAlertCheckBoxInfo checkbox;
} AVAlertParamsRec, *AVAlertParams;
```

Description

Data structure containing information about the format of an Alert dialog.

Header File

AVExpT.h

Related Methods

AVAlertWithParams

Members

size	The size of the structure. Must be set to **sizeof(AVAlertParamsRec)**.
parentDoc	The AVDoc that is the modal parent of the alert dialog. May be **NULL**. The **parentDoc** can be **NULL**, in which case the alert dialog is parented off of the currently active doc, if there is one. The **parentDoc** is a no-op on the Mac.
windowTitle	The title of the dialog. May be **NULL**, in which case the default title, “Adobe Acrobat”, is used.
iconType	The icon to display. Must be one of the AVAlert Icons.
message	The message to display.
beep	Set to **true** to trigger a beep when the dialog is shown.

button1, button2, button3	**AVAlertButtonInfo** structures describing the dialog's buttons. Any or all may be **NULL**. If all are **NULL**, the dialog is shown with an **OK** button.
checkBox	**AVAlertCheckBoxInfo** structure describing the dialog's checkbox. May be **NULL**.

AVAnnotHandler

AVAnnotHandlerRec

```
typedef struct _t_AVAnnotHandler *AVAnnotHandler;
    typedef struct _t_AVAnnotHandler {
    ASSize_t size;
    ASUns32 flags;
    AVAnnotHandlerDoClickProc DoClick;
    AVAnnotHandlerAdjustCursorProc AdjustCursor;
    AVAnnotHandlerPtInAnnotViewBBoxProc PtInAnnotViewBBox;
    AVAnnotHandlerGetAnnotViewBBoxProc GetAnnotViewBBox;
    AVAnnotHandlerNotifyAnnotRemovedFromSelectionProc
    NotifyAnnotRemovedFromSelection
    AVAnnotHandlerNotifyAnnotAddedToSelectionProc
    NotifyAnnotAddedToSelection;
    AVAnnotHandlerDrawProc Draw;
    AVAnnotHandlerNewProc New;
    AVAnnotHandlerGetTypeProc GetType;
    AVAnnotHandlerNotifyDestroyProc NotifyDestroy;
    AVAnnotHandlerDoPropertiesProc DoProperties;
    AVAnnotHandlerDoKeyDownProc DoKeyDown;
    AVAnnotHandlerGetLayerProc GetLayer;
    /* New callbacks in Acrobat 3.0 */
    AVAnnotHandlerCursorEnterProc CursorEnter;
    AVAnnotHandlerCursorExitProc CursorExit;
    /* New callbacks in Acrobat 3.01 */
    AVAnnotHandlerCopyProc Copy;
    /* New callbacks in Acrobat 4.0 */
    AVAnnotHandlerDoClickProc DoRightClick;
    AVAnnotHandlerGetInfoProc GetInfo;
    AVAnnotHandlerDeleteInfoProc DeleteInfo;
    /* New callbacks in Acrobat 5.0 */
    AVAnnotHandlerCanPerformOpProc CanPerformOp;
    AVAnnotHandlerPerformOpProc PerformOp;
    AVAnnotHandlerDoKeyDownExProc DoKeyDownEx;
    AVAnnotHandlerDrawExProc DrawEx;
} AVAnnotHandlerRec;
```

Description

Data structure containing callbacks that implement an annotation handler. The callbacks implement the annotation handler functions. For example, draw the

annotation, highlight the annotation when it is selected, and the data specifies properties of the annotation (for example, text selection behavior).

Header File

AVEXPT.h

Related Callbacks

AVAnnotHandlerEnumProc
PDAnnotHandlerDeleteAnnotInfoProc
PDAnnotHandlerGetAnnotInfoFlagsProc
PDAnnotHandlerGetAnnotInfoProc
PDAnnotHandlerGetTypeProc

Related Methods

AVAppRegisterAnnotHandler
AVAppGetAnnotHandlerByName
AVDocCopyAnnot

Members

size	Size of the data structure. Must be set to **sizeof(AVAnnotHandlerRec)**.
flags	A collection of flags that affect the annotation's behavior. The flags may be OR-ed together. NOTE: These flags are not the ones used in **PDAnnotArray**. Permissible flags include: **ANNOT_CLIP_TEXT_SELECTION** If this flag is set, text selection in the main document never selects text within the annotation (that is, the annotation behaves like the Acrobat viewer's text annotation). If this flag is not set, text selection in the main document can select text within the annotation (that is, the annotation behaves like the Acrobat viewer's link annotation). **ANNOT_WANTS_SHIFT_KEY** This flag is set to prevent the standard shift-key ignores annotation's behavior.

AVAnnotHandlerInfo

AVAnnotHandlerInfoRec

```
typedef struct _t_AVAnnotHandlerInfoRec {
ASSize_t size;
unsigned char* cName;
void* vBitmap;
} AVAnnotHandlerInfoRec, *AVAnnotHandlerInfo;
```

Description

Structure used to describe information for a particular annotation type.

Header File

AVExpt.h

Related Callbacks

AVAnnotHandlerDeleteInfoProc
AVAnnotHandlerGetInfoProc

Related Methods

AVAnnotHandlerGetInfo

Members

size	Size of the data structure. Must be set to **sizeof(AVAnnotHandlerInfoRec)**.
cName	User interface name of annotation type in the host encoding.
vBitmap	Platform-dependent bitmap used as the annotation icon. If **NULL**, the annotation manager uses the unknown annotation icon for the annotation.

AVAnnotOp

```
typedef ASEnum16 AVAnnotOp;
enum {
    kAVAnnotAcceptFocus,
    kAVAnnotLostFocus,
    kAVAnnotDefaultAction,
    kAVAnnotShowMenu
};
```

Description

An enumeration detailing operations that you can ask the annotation to react to.

Header File

AVExpT.h

Related Methods

AVPageViewFocusAnnotPerformOp

Members

kAVAnnotAcceptFocus	Accept input focus.
kAVAnnotLostFocus	You lost the input focus.
kAVAnnotDefaultAction	The user hits **Enter** while you're the focus.
kAVAnnotShowMenu	Show a context-menu for the annot.

AVAnnotOpData

AVAnnotOpDataRec

```
typedef struct _t_AVAnnotOpData {
    ASSize_t size;
    ASInt32 x;
    ASInt32 y;
    void * clientData;
} AVAnnotOpDataRec, *AVAnnotOpData;
```

Description

Additional information passed to the annotation when performing an operation. For some operations a **NULL** will be passed; in others a pointer to an **AVAnnotOpData** structure will be passed.

Header File

AVExpT.h

Related Methods

AVPageViewSetFocusAnnot

Members

size	Set by Acrobat to the size of this record.
x	If the operation is **kAVAnnotShowMenu**, provides the default location of the menu in AV device coordinates.
y	
clientData	Used by Forms and Annots to determine when an annotation is getting focus via a mouse click.

AVAuxDataHandler

AVAuxDataHandlerRec

```
typedef struct _t_AVAuxDataHandler {
    ASSize_t size;
    AVAuxDataPerformProc PerformProc;
} AVAuxDataHandlerRec, *AVAuxDataHandler;
```

Description

Data structure containing callbacks and data representing an auxiliary data handler.

Header File

AVExpT.h

Related Methods

AVDocSendAuxData
AVHasAuxDataHandler
AVRegisterAuxDataHandler

Members

size	Size of the data structure. Must be set to **sizeof(AVAuxDataHandlerRec)**.
PerformProc	Called with auxiliary data when a client calls **AVDocSendAuxData**. This proc should perform whatever action it needs to do for the auxiliary data.

AVBatchContext

```
typedef struct _t_AVBatchContext *AVBatchContext;
```

Description

Placeholder only. Not currently implemented.

AVCommandHandler

AVCommandHandlerRec

```
typedef AVCommandHandlerRec *AVCommandHandler;
typedef struct _t_AVCommandHandler {
    ASSize_t size;
    AVCmdHandlerInitProc Initialize;
    AVCmdHandlerTermProc Terminate;
    AVRegisterCommandsProc RegisterCommands;
    AVCommandCreatedProc Created;
    AVCommandDestroyProc Destroy;
    AVCommandSetProc SetParams;
    AVCommandGetProc GetParams;
    AVCommandGetProc GetProps;
    AVCommandShowDialogProc ShowDialog;
    AVCommandWorkProc Work;
    AVCommandCancelProc Cancel;
    AVCommandResetProc Reset;
    AVCommandPreflightSequenceProc PreflightSequence;
    AVCommandPreflightFileProc PreflightFile;
    AVCommandPostflightFileProc PostflightFile;
    AVCommandPostflightSequenceProc PostflightSequence;
} AVCommandHandlerRec;
```

Description

A set of callbacks that perform the actions required of a command.

Header File

AVExpT.h

Related Callbacks

None

Related Methods

None.

Members

Initialize	Called once for each handler registered.
Terminate	Called once for each handler registered when Acrobat shuts down. Called before plug-ins are unloaded

RegisterCommands	The application maintains a global list of commands that you can choose from when building your own command. During the initialization sequence, all registered command handlers are asked to build and register all the commands that the handler wants included in the global command list.
Created	Called after a command is created. The command handler can establish default parameters, and so forth, for the newly created command.
Destroy	Called before a command is destroyed. The command handler should free any memory allocated by the command, and so forth.
SetParams	Called to set the command's parameters.
GetParams	Called to retrieve the command's parameters.
GetProps	Called to retrieve command properties.
ShowDialog	Displays the command's parameter setting dialog and allows the user to alter the parameters.
Work	Do some work. If the command doesn't finish the work, return **kAVCommandWorking**. If the command finishes the work, return **kAVCommandDone**. If the user cancels the operation, return **kAVCommandCanceled**. If an error occurs, return **kAVCommandInError**. In most cases the work procedure will be called until you return **kAVCommandDone**, but in some cases, you may be called on to **Cancel** or **Reset** before the work is done.
Cancel	Stop working and pretend you reached a point where all work was done.
Reset	Stop working, clear any errors, and try to get yourself back into a Ready state. For many commands this is equivalent to canceling.
PreflightSequence	See sequence description in callback reference.
PreflightFile	See sequence description in callback reference.
PostflightFile	See sequence description in callback reference.
PostflightSequence	See sequence description in callback reference.

AVCommandStatus

```
typedef ASEnum16 AVCommandStatus;
enum {
    kAVCommandReady,
    kAVCommandWorking,
    kAVCommandDone,
    kAVCommandCanceled,
    kAVCommandInError
};
```

Description

An enumerated list of status codes that can be returned by various **AVCommand** methods.

Header File

AVExpT.h

Related Methods

AVCommandGetStatus

Members

kAVCommandReady	Not working, but ready to.
kAVCommandWorking	Still working.
kAVCommandDone	Done working.
kAVCommandCanceled	Canceled.
kAVCommandInError	In error.

AVCommandUIPolicy

```
typedef enum {
    kAVCommandUIInteractive = 0,
    kAVCommandUISemiInteractive = 1,
    kAVCommandUIErrorsOnly = 2,
    kAVCommandUISilent = 3
} AVCommandUIPolicy;
```

Description

An enumeration detailing how the command is expected to interact with the user.

Header File

AVExpT.h

Related Methods

AVCommandGetUIPolicy

Members

kAVCommandUIInteractive	Fully interactive. Gather parameters based on currently active document at the time the dialog goes up. Display errors and warnings.
kAVCommandUISemiInteractive	Interactive but under the control of the sequencing user interface. When showing a dialog, use the parameters passed in rather than the parameters gathered from the document.
kAVCommandUIErrorsOnly	Display errors but no other dialogs.
kAVCommandUISilent	Never put up a dialog.

AVConversionClientData

```
typedef struct _t_AVConversionClientData
*AVConversionClientData;
```

Description

The user-defined data that is supplied when a conversion handler is registered with the conversion server. This data is provided to all **AVConversionHandler** callbacks.

Header File

AVExpt.h

Related Callbacks

AVConversionDefaultSettingsProc
AVConversionParamDescProc
AVConversionSettingsDialogProc
AVConversionConvertFromPDFProc
AVConversionConvertToPDFProc

Related Methods

None

AVConversionEnumProcData

```
typedef struct _t_AVConversionEnumProcData
*AVConversionEnumProcData;
```

Description

The user-defined data that is supplied to either of the conversion handler enumeration routines.

Header File

AVExpt.h

Related Callbacks

AVConversionFromPDFEnumProc
AVConversionToPDFEnumProc

Related Methods

AVConversionEnumFromPDFConverters
AVConversionEnumToPDFConverters

AVConversionFlags

```
typedef ASUns32 AVConversionFlags;
```

Description

An enumerated list of flags that can be passed to **AVConversionConvertTo/FromPDF** to allow non-default behavior.

Header File

AVExpT.h

Related Callbacks

None

Related Methods

None

Members

kAVConversionNoFlags	No flags.
kAVConversionAsyncOkay	Asynchronous conversion is allowed.
kAVConversionPopSettingsDialog	Pop the settings dialog, if one is provided for this conversion handler.
kAVConversionInteractive	Interactive mode. Indicates converter can pop additional dialogs if necessary.
kAVConversionDontOverwrite	Do not overwrite the existing files EXCEPT for the source file. This flag is only used in batch.

AVConversionFromPDFHandler

AVConversionFromPDFHandlerRec

```
typedef struct _t_AVConversionFromPDFHandler {
    AVFileFilterRec convFilter;
    ASSize_t size;
    char uniqueID[256];
    ASBool canDoSync;
    ASInt16 priority;
    AVConversionDefaultSettingsProc defaultSettings;
    AVConversionParamDescProc parameterDescription;
    AVConversionSettingsDialogProc settingsDialog;
    AVConversionConvertFromPDFProc convert;
    AVConversionClientData clientData;
} AVConversionFromPDFHandlerRec, *AVConversionFromPDFHandler;
```

Description

Data structure containing callbacks that implement the “FromPDF” handler’s functionality and data that describes the handler’s conversion capabilities.

Header File

AVExpt.h

Related Callbacks

AVConversionFromPDFEnumProc

Related Methods

AVAppRegisterFromPDFHandler

Members

convFilter	An **AVFileFilterRec** that describes the types of files that this filter can convert. See description of **AVFileFilterRec** and **AVFileDescRec** for more details.
size	Size of the data structure. Must be set to **sizeof(AVConversionFromPDFHandlerRec)**.
uniqueID	Unique identifier for the conversion handler. Should be of the form **com.companyname.productname.type**. See **PDF_FILEFILTERREC_UNIQUEID** and **FDF_FILEFILTERREC_UNIQUEID** in AVExpT.h.

canDoSync	**true** if the converter can perform synchronous conversion, **false** if the converter only does asynchronous conversion. This capability is required for the handler to be accessible from the batch framework.
priority	An integer that indicates where converter should be registered in list of **FromPDF** handlers. A high priority number indicates that this converter is checked earlier than other converters. All Acrobat 5.0 converters have a priority of 0.
defaultSettings	**AVConversionDefaultSettingsProc** that is called when the handler is registered with the conversion server. Can be **NULL**.
parameterDescription	**AVConversionParamDescProc** that is called when a parameter description of this handler is requested. Can be **NULL**.
settingsDialog	**AVConversionSettingsDialogProc** that is called when the batch framework or the open dialog requests a settings dialog for this handler. Can be **NULL**.
convert	**AVConversionConvertFromPDFProc** that is called to perform the conversion operation.
clientData	Provided to all AVConversion callbacks.

AVConversionStatus

```
typedef ASEnum16 AVConversionStatus;
```

Description

Enumerated data type used to describe the status of a conversion operation.

Header File

AVExpT.h

Related Callbacks

ASFileSysGetItemPropsProc
ASFileSysFirstFolderItemProc
ASFileSysNextFolderItemProc

Related Methods

ASFileSysGetItemProps
ASFileSysFirstFolderItem
ASFileSysNextFolderItem

Members

kAVConversionFailed	The conversion failed.
kAVConversionSuccess	The conversion succeeded.
kAVConversionSuccessAsync	The conversion will continue asynchronously.
kAVConversionCancelled	The conversion was cancelled.

AVConversionToPDFHandler

AVConversionToPDFHandlerRec

```
typedef struct _t_AVConversionToPDFHandler {
    AVFileFilterRec convFilter;
    ASSize_t size;
    char uniqueID[256];
    ASBool canDoSync;
    ASInt16 priority;
    AVConversionDefaultSettingsProc defaultSettings;
    AVConversionParamDescProc parameterDescription;
    AVConversionSettingsDialogProc settingsDialog;
    AVConversionConvertToPDFProc convert;
    AVConversionClientData clientData;
} AVConversionToPDFHandlerRec, *AVConversionToPDFHandler;
```

Description

Data structure containing callbacks that implement the “ToPDF” handler’s functionality and data that describes the handler’s conversion capabilities.

Header File

AVCalls.h

Related Callbacks

AVConversionToPDFEnumProc

Related Methods

AVAppRegisterToPDFHandler

Members

convFilter	An **AVFileFilterRec** that describes the types of files that this filter can convert. See description of **AVFileFilterRec** and **AVFileDescRec** for more details.
size	Size of the data structure. Must be set to **sizeof(AVConversionFromPDFHandlerRec)**.
uniqueID	Unique identifier for the conversion handler. Should be of the form **com.companyname.productname.type**. See **PDF_FILEFILTERREC_UNIQUEID** and **FDF_FILEFILTERREC_UNIQUEID** in AVExpT.h.

canDoSync	**true** if the converter can perform synchronous conversion, **false** if the converter only does asynchronous conversion. This capability is required for the handler to be accessible from the batch framework.
priority	An integer that indicates where converter should be registered in list of “FromPDF” handlers. A high priority number indicates that this converter is checked earlier than other converters. All Acrobat 5.0 converters have a priority of **0**.
defaultSettings	**AVConversionDefaultSettingsProc** that is called when the handler is registered with the conversion server. Can be **NULL**.
parameterDescription	**AVConversionParamDescProc** that is called when a parameter description of this handler is requested. Can be **NULL**.
settingsDialog	**AVConversionSettingsDialogProc** that is called when the batch framework or the open dialog requests a settings dialog for this handler. Can be **NULL**.
convert	**AVConversionConvertToPDFProc** that is called to perform the conversion operation.
clientData	Provided to all AVConversion callbacks.

AVCursor

```
typedef struct _t_AVCursor *AVCursor;
```

Description

Data structure representing the cursor. See **Predefined Cursors** for a list of already defined cursor shapes.

Header File

AVExpT.h

Related Methods

AVSysGetCursor
AVSysGetStandardCursor
AVSysSetCursor

AVDestInfo

AVDestInfoRec

```
typedef struct _t_AVDestInfo {
    ASSize_t size;
    const char* namedDest;
    ASInt32 nameLength;
    ASInt32 pageNum;
    ASAtom fitType;
    ASFixedRect destRect;
    ASFixed zoom;
} AVDestInfoRec, *AVDestInfo;
```

Description

Data structure representing a destination in a PDF document. An **AVDestInfo** carries all the information that a **PDViewDestination** can. Used for ensuring that cross-document links in external windows act as expected, so a client can go to a destination without building it via **PDViewDestCreate**, which doesn't work on read-only documents.

Header File

AVExpT.h

Related Methods

AVPageViewToDestInfo
AVPageViewUseDestInfo
AVDestInfoDestroy

Members

size	Size of the data structure. Must be set to **sizeof(AVDestInfo)**.
namedDest	The named destination associated with this destination. If this is non-**NULL,** the other attributes are ignored. This destination may contain multi-byte characters.
nameLength	Length of **namedDest**, in bytes.
pageNum	The page number of the destination view.
fitType	The fit type of the destination view. Must be one of **View Destination Fit Types**.

destRect	A rectangle enclosing the destination view.
zoom	The zoom factor of the destination view. Use zero to inherit the zoom.

AVDocOpenParams

AVDocOpenParamsRec

```
typedef struct _t_AVDocOpenParams {
    ASSize_t size;
    ASBool useFrame;
    AVRect frame;
    ASBool useVisible;
    ASBool visible;
    /* Available only in or after Acrobat 3.0 */
    ASBool useServerType;
    const char* serverType;
    void* serverCreationData;
    ASBool useSourceDoc;
    AVDoc sourceDoc;
    ASBool useReadOnly;
    ASBool readOnly;
    ASBool useViewType;
    const char* viewType;
    ASBool useViewDef;
    AVDocViewDef viewDef;
    /* New in Acrobat 5.0 */
    ASBool usePermReqProc;
    AVDocPermReqProc permReqProc;
} AVDocOpenParamsRec, *AVDocOpenParams;
```

Description

Parameters used when opening a file using **AVDocOpenFromASFileWithParams**, **AVDocOpenFromFileWithParams**, or **AVDocOpenFromPDDocWithParams**.

In UNIX, it is not possible to set the frame of the **NULL** document (that is, the window to show when no document is open) using this data structure.

Header File

AVExpT.h

Related Methods

AVDocOpenFromASFileWithParams
AVDocOpenFromFileWithParams
AVDocOpenFromPDDocWithParams

Members

size	Size of the data structure. Must be set to **sizeof(AVDocOpenParamsRec).**
useFrame	If **true**, **frame** is used to specify the size and location of the window into which the document is opened. If **false**, **frame** is ignored and the default frame is used instead. See also **visible**.
frame	An **AVRect** specifying the size and location of the window into which the document is opened. In Mac OS, the coordinates are global screen coordinates. In Windows, the coordinates are MDI client coordinates. See also **visible**.
useVisible	If **true**, **visible** is used to determine whether or not the window is visible after the document is opened. If **false**, **visible** is ignored. See also **visible**.
visible	Specifies the window's visibility. If **visible** is **false** and **useVisible** is **true**, **frame** is ignored—regardless of the setting of **useFrame**. In Mac OS, if **true**, the document is opened into a visible window. If **false**, the document is opened into a hidden window. In Windows, if **true**, the document is opened in a visible window. If **false**, the document is opened in a minimized window.
useServerType	Indicates whether the **serverType** and *serverCreationData* fields are used.
serverType	Name of **AVDoc** server for this **AVDoc**: "EXTERNAL" — the **AVDoc** server for an external window
serverCreationData	Platform-dependent server data to associate with the **AVDoc** server. For a *serverType* of "EXTERNAL", must be of type **ExternalDocServerCreationData**.
useSourceDoc	Indicates whether the **sourceDoc** field is used.
sourceDoc	**AVDoc** whose window will be taken over by new document. **sourceDoc** will be closed at the same time.
useReadOnly	Indicates whether the **readOnly** field is used.
readOnly	If **true**, open the document in read-only mode.
useViewType	Indicates whether the **viewType** field is used.

viewType	Type of view to open on document. Permissible values are: "**AVPageView**" — Displays only the **AVPageView**, that is, the window that displays the PDF file. Does not display scrollbars, the toolbar, and bookmark or thumbnails pane. Annotations, such as links, are active. "**AVDocView**" — Displays the **AVPageView**, scrollbars, and bookmark or thumbnails pane. Annotations, such as links, are active. "**AVExternalView**" — Displays the **AVPageView**, scrollbars, toolbar, and bookmark or thumbnails pane. Annotations, such as links, are active. "**AVEmbeddedView**" — Embeds the PDF file in an external document, an HTML file, for example. Show the first page of the PDF file; no scrollbars, the toolbar, and bookmark or thumbnails pane are visible. Annotations, such as links, are neither displayed nor active.
useViewDef	Indicates whether the **viewDef** field is used.
viewDef	Initial view with which to open the document. Must be an **AVDocViewDef**.
usePermReqProc	Boolean indicating whether the **permReqProc** field be used.
permReqProc	Return **PDPermReqDenied** to deny a permission, or **PDPermReqGranted** to grant one.

AVDocPrintParams

AVDocPrintParamsRec

```
typedef struct _t_AVDocPrintParams *AVDocPrintParams;
typedef struct _t_AVDocPrintParams {
    ASSize_t size;
    ASBool interactive;
    ASBool cancelDialog;
    ASInt32 firstPage;
    ASInt32 lastPage;
    ASInt32 psLevel;
    ASBool binaryOK;
    ASBool shrinkToFit;
    ASAtom fileSysName;
    ASPathName filePathName;
    ASPlatformPrinterSpec printerSpec;
    ASBool embedded;
    AVRect32 embeddedRect;
    ASBool emitToPrinter;
    ASBool emitToFile;
    ASBool doColorSeparations;
    ASEnum8 emitFileOption;
    ASEnum8 emitFontOption;
    ASUns32 emitFlags;
    /* New in Acrobat 4.0 */
    PDPageRange* ranges;
    ASInt16 numRanges;
    ASBool TTasT42;
    ASBool printAsImage;
    ASBool printerHasFarEastFonts;
    ASBool reverse;
    ASInt32 pageSpec; /* Updated in 5.0 */
    /* New in Acrobat 5.0 */
    ASInt32 transparencyLevel;
    char destProfile[256];
} AVDocPrintParamsRec;
```

Description

Structure that specifies how to print a document.

Header File

AVExpT.h

Related Types

EmitFontOptions
Emit Flags

Related Methods

AVDocPrintPagesWithParams

Members

size	Size of the data structure. Must be set to **sizeof(AVDocPrintParamsRec).**
One and only one of the following booleans must be set:	• **interactive** — Displays a Print dialog box and print status window while printing. • **cancelDialog** — Displays a Cancel dialog box while printing. • **embedded** — Renders one page scaled to the size specified by **embeddedRect.** • **emitToPrinter** — Non-interactive output to a printer without a Print dialog box or status window. • **emitToFile** — Non-interactive output to a file. Used to emit color separations or EPS. This flag *cannot* be used with the Acrobat Reader.
interactive	If **true**, displays dialog boxes; otherwise does not display dialog boxes.
cancelDialog	If **interactive** is **false** and *cancelDialog* is **true**, a Cancel dialog box appears.
firstPage, lastPage, psLevel, binaryOk, and **shrinkToFit** are used if **emitToPrinter** or **emitToFile** are **true**.	
firstPage	First page to print. The first page is 0. If –1, all pages are printed. If you set **firstPage** and **lastPage** to 0, the first page of the document is printed.
lastPage	Last page to print. If **firstPage** is –1, this parameter is ignored.
psLevel	If printing to PostScript, 1 means emit as level 1, 2 means level 2.
binaryOK	**true** if a binary channel to the printer is supported, **false** otherwise.

shrinkToFit	**true** if the page is scaled to fit the printer page size, **false** otherwise.
fileSysName and **filePathName** are used if **emitToPrinter** or **emitToFile** is **true.**	If **emitToPrinter** is **true** and **filePathName** is non-**NULL**, the system printer driver is used to emit the output stream to the file. Implemented for Windows only.
fileSysName	The file system name; see **filePathName**. For the operation of printing to a printer (**emitToPrinter** = **true**), if **filePathName** is specified, **fileSysName** must be the name of the default file system. You can get the file system's name from the **ASFileSysGetFileSysNameProc** callback in the **ASFileSysRec** of the file system you are using.
filePathName	If non-**NULL**, **filePathName** is a platform path for the specified **fileSysName**, or, if **fileSysName** is **ASAtomNull**, it is one of the following: • In Windows: a C-string pathname • In Mac OS: a **FSSpecPtr** • In UNIX: a C-string pathname
printerSpec	Optionally used if **interactive**, **embedded**, or **emitToPrinter** is **true**. If **NULL**, a default system printer is used. If non-**NULL**, **printerSpec** is a platform-specific value. Must be an **ASPlatformPrinterSpec**.
embedded	**true** if an embedded view of a page to print, **false** otherwise. • **firstPage** and **lastPage** must be the same. • **embeddedRect** specifies the location on the page where the view of the page is to appear. • The printer must be specified as an **HDC** or **CGrafPtr**.
embeddedRect	Location on the page where the view of the page is to appear, specified in device coordinates for the current printer.
emitToPrinter	If **true**, use the system printer driver for output. If **filePathName** is specified, uses the driver to create the file. Raises **genErrBadParm** if an invalid parameter is provided (for example, printing to PDFWriter, Distiller, or to a printer that has been un-installed).

The following parameters are for emission of PostScript Level 1 Color Separations and EPS—or standard PostScript. Creates and writes to **filePathName** (may not be **NULL**). Does not use the system printer driver. Only has partial font emitting capabilities on some platforms: • Macintosh: embedded and system Type 1 fonts only; no TrueType or substitution fonts • UNIX: all fonts • Windows: embedded and system Type 1 fonts only; no TrueType or substitution fonts	
emitToFile	If **true**, emit non-interactive output to a file. Used to emit color separations or EPS. This flag cannot be used with the Acrobat Reader.
doColorSeparations	Perform level 1 color separations. See *Color Separation Conventions for PostScript Language Programs*, Technical Note #5044.
emitFileOption	File output options: PostScript or EPS, with or without a preview. *Must* be one of the following values: **kAVEmitFilePS** — PostScript file **kAVEmitFileEPSNoPrev** — EPS file with no preview **kAVEmitFileEPSMacStdPrev** — EPS file with standard preview **kAVEmitFileEPSMacExtPrev** — EPS file with extended preview
emitFontOption	Font output options. Must be one of **EmitFontOptions**.
emitFlags	Additional emit options. Must be one of **Emit Flags**.
The following parameters provide support for multiple page ranges:	
ranges	Must be a **PDPageRange**.
numRanges	Range of pages to print.
The following parameters control **TrueType --> Type 1** conversion for PostScript printing.	
TTasT42	If **true**, send TrueType fonts as TrueType fonts (level 3 and most level 2 PostScript printers. If **false**, convert TrueType to Type 1. This is typically *only* desirable for Level 1 PostScript where no TrueType handling is present.
printAsImage	If **true**, print pages as an image.
printerHasFarEastFonts	If **true**, do not down load Far East fonts to printer.
reverse	Print from **lastPage** to **firstPage**.

pageSpec *(Updated for Acrobat 5.0)*	Indicates odd, even, or all pages to be printed within the range—only meaningful when **firstPage** and **lastPage** parameters are used. See **Page Specification**.
transparencyLevel *(New for Acrobat 5.0)*	Transparency level reflects the pull-down on the Advanced print dialog for controlling how much rasterization should be performed when flattening transparent objects during printing. **1** = The entire page will be rasterized. Use this setting for printing or exporting complex pages with many transparent objects. Ideal for fast output at low resolution; higher resolution will yield higher quality but increase processing time. Size of saved files or print spool files may be large. **2** = Maintains simpler vector objects, but rasterizes more complex areas involving transparency. Ideal for artwork with only a few transparent objects. Some printers may yield rough transitions between bordering vector and raster objects and make hairlines appear thicker. Appropriate for low-memory systems. **3** = Maintains most objects as vector data, but rasterizes very complex transparent regions. Generally the best setting for printing and exporting most pages. With some printers, improves transition issues between bordering vector and raster objects. **4** = Maintains most of the page content as vectors, rasterizing only extremely complex areas. Produces high quality output that is generally resolution-independent. Higher occurrences of transparent regions will increase processing time. With some printers improves transition issues between bordering vector and raster objects. **5** = The entire page is printed or exported as vector data, to the greatest extent possible. This produces the highest quality resolution-independent output. Processing of complex pages may be very time and memory intensive.
destProfile	Represents the name of the destination profile to use when doing host-based color management.

AVDocSaveParams

AVDocSaveParamsRec

```
typedef struct _t_AVDocSaveParams {
    ASSize_t size;
    ASBool useSaveDialog;
    /* New in Acrobat 5.0 */
    ASBool dontAllowConversions;
} AVDocSaveParamsRec, *AVDocSaveParams;
```

Description

Structure used by **AVDocDoSaveAsWithParams** containing parameters that a client wishing to save a file might want to specify. It is passed in by address to **AVDocDoSaveAsWithParams** with a size field so that current plug-ins replacing **AVDocDoSaveAsWithParams** won't break in the future if new open specifications are provided.

Header File

AVExpt.h

Related Callbacks

None

Related Methods

AVDocDoSaveAsWithParams

Members

size	Size of the data structure. Must be set to **sizeof(AVDocSaveParamsRec)**.
useSaveDialog	Use the standard file Save dialog box.
dontAllowConversions *(New in Acrobat 5.0)*	Don't use convert from PDF handlers.

AVDocSelectionServer

AVDocSelectionServerRec

```
typedef struct _t_AVDocSelectionServer {
 ASSize_t size;
 AVDocSelectionGetTypeProc GetType;
 AVDocSelectionGettingSelectionProc GettingSelection;
 AVDocSelectionAddedToSelectionProc AddedToSelection;
 AVDocSelectionLosingSelectionProc LosingSelection;
 AVDocSelectionRemovedFromSelectionProc
RemovedFromSelection;
 AVDocSelectionCanSelectAllProc CanSelectAll;
 AVDocSelectionSelectAllProc SelectAll;
 AVDocSelectionCanPropertiesProc CanProperties;
 AVDocSelectionPropertiesProc Properties;
 AVDocSelectionCanDeleteProc CanDelete;
 AVDocSelectionDeleteProc Delete;
 AVDocSelectionCanCopyProc CanCopy;
 AVDocSelectionCopyProc Copy;
 AVDocSelectionEnumSelectionProc EnumSelection;
 AVDocSelectionShowSelectionProc ShowSelection;
 AVDocSelectionCanCutProc CanCut;
 AVDocSelectionCutProc Cut;
 AVDocSelectionCanPasteProc CanPaste;
 AVDocSelectionPasteProc Paste;
 AVDocSelectionKeyDownProc KeyDown;
 /* Renamed in Acrobat 4.0 */
 AVDocSelectionHighlightSelectionProc HighlightSelection;
 /* New in Acrobat 4.0 */
 AVDocSelectionGetSelectionTypeProc GetSelectionType;
 AVDocSelectionEnumPageRangesProc EnumPageRanges;
 /* New in Acrobat 5.0 */
 AVDocSelectionGetAVRectProc GetAVRect;
 AVDocSelectionShowMenuProc ShowMenu;
} AVDocSelectionServerRec, *AVDocSelectionServer;
```

Description

Data structure containing callbacks that implement a selection server. The callbacks implement the selection server functions. For example, add an item to the selection, remove an item from the selection, copy the current selection to the clipboard.

Header File

AVExpT.h

Related Methods

AVDocRegisterSelectionServer
AVDocGetSelectionServerByType

Members

size	Size of the data structure. Must be set to **sizeof(AVDocSelectionServerRec)**.

AVDocViewDef

AVDocViewDefRec

```
typedef struct _t_AVDocViewDef {
    ASSize_t size;
    ASBool bringToFront;
    ASBool usePageViewInfo; /* page view info */
    PDLayoutMode pageViewLayoutMode;
    ASInt32 pageViewPageNum;
    AVZoomType pageViewZoomType;
    ASFixed pageViewZoom;
    ASInt16 pageViewX;
    ASInt16 pageViewY;
    ASBool pageViewStartThread;
    ASInt32 pageViewThreadIndex;
    PDBead pageViewBead;
    ASBool useOverViewInfo; /* overview info */
    PDPageMode overViewMode;
    ASInt16 overViewPos;
    ASInt32 overViewX;
    ASInt32 overViewY;
    ASBool useWindowInfo; /* window info */
    AVRect windowFrame;
    ASBool unused1;
    const char* unused2;
} AVDocViewDefRec, *AVDocViewDef;
```

Description

Structure that defines a view of a document, including page, zoom, and so on.

Header File

AVExpT.h

Related Methods

AVDocGetViewDef

Members

size	Size of the data structure. Must be set to **sizeof(AVDocViewDef).**

bringToFront	If **true**, bring window to front; if **false**, don't bring window to front.
usePageViewInfo	If **true**, use the next 6 page view fields. If **false**, it does not use them.
pageViewLayoutMode	Page layout mode; must be one of **PDLayoutMode**.
pageViewPageNum	Page number.
pageViewZoomType	Zoom type; must be one of **AVZoomType**.
pageViewZoom	Zoom factor; used if **pageViewZoomType** is **AVZoomNoVary**. Use zero to inherit zoom.
pageViewX	The x-coordinate to scroll to.
pageViewY	The y-coordinate to scroll to.
pageViewStartThread	If **true**, use the next two article thread fields. If **false**, it does not use them.
pageViewThreadIndex	Current thread index.
pageViewBead	Current **PDBead**.
useOverViewInfo	If **true**, use the next four view fields. If **false**, it does not use them.
overViewMode	The **PDPageMode** to use.
overViewPos	Position of splitter.
overViewX	The x-coordinate to scroll to in bookmark or thumbnail pane.
overViewY	The y-coordinate to scroll to in bookmark or thumbnail pane.
useWindowInfo	If **true**, use the *windowFrame* field. If **false**, it does not use them.
windowFrame	New window frame in which to display the document.
unused1	Currently unused.
unused2	Currently unused.

AVDragType

```
typedef ASEnum8 AVDragType;
enum{
    kAVDragRect,
    kAVDragTopLeft,
    kAVDragTopRight,
    kAVDragBottomRight,
    kAVDragBottomLeft,
    kAVDragTopMiddle,
    kAVDragRightMiddle,
    kAVDragBottomMiddle,
    kAVDragLeftMiddle,
    kAVDragSnapToTopLeft,
    kAVDragSnapToTop,
    kAVDragSnapToTopRight,
    kAVDragSnapToRight,
    kAVDragSnapToBottomRight,
    kAVDragSnapToBottom,
    kAVDragSnapToBottomLeft,
    kAVDragSnapToLeft
};
```

Description

Enumerates the commands for moving and changing the size of a rectangle.

Header File

AVExpT.h

Related Methods

AVRectHandleHitTest

Members

kAVDragRect	Move the whole rectangle.
kAVDragTopLeft	Top left corner.
kAVDragTopRight	Top right corner.
kAVDragBottomRight	Bottom right corner.
kAVDragBottomLeft	Bottom left corner.
kAVDragTopMiddle	Top middle.

kAVDragRightMiddle	Right middle.
kAVDragBottomMiddle	Bottom middle.
kAVDragLeftMiddle	Left middle.
kAVDragSnapToTopLeft	Snap to top left.
kAVDragSnapToTop	Snap to top.
kAVDragSnapToTopRight	Snap to top right.
kAVDragSnapToRight	Snap to right.
kAVDragSnapToBottomRight	Snap to bottom right.
kAVDragSnapToBottom	Snap to bottom.
kAVDragSnapToBottomLeft	Snap to bottom left.
kAVDragSnapToLeft	Snap to left.

AVExtensionInfo

AVExtensionInfoRec

```
typedef struct _AVExtensionInfoRec {
    ASAtom asaName;
    ASBool bLoaded;
    ASBool bCertified;
    ASUns16 nMajorVersion, nMinorVersion;
    char *cDate;
    ASPathName aspFile;
    char *cDescription;
    char *cLegal;
    char *cDependencies;
} AVExtensionInfoRec, *AVExtensionInfo;
```

Description

Data structure containing information about a plug-in loaded by the viewer.

NOTE: For third-party (non-Adobe) plug-ins only the **asaName**, **bLoaded**, and **bCertified** members will be valid.

Header File

AVExpT.h

Related Methods

AVExtensionAcquireInfo
AVExtensionReleaseInfo

Members

asaName	The registered name of the plug-in.
bLoaded	Always **true** indicating that the plug-in was loaded.
bCertified	**true** if the plug-in is certified, **false** otherwise.
nMajorVersion, nMinorVersion	The major and minor versions of the plug-in.
cDate	The creation timestamp on the plug-in.
aspFile	The path to the plug-in.
cDescription	A description of the plug-in. May be **NULL**.

cLegal	Legal text associated with the plug-in. May be **NULL**.
cDependencies	The dependencies of the plug-in.

AVFileDescRec

```
typedef struct _t_AVFileDescRec {
    char extension[32];
    ASUns32 macFileType;
    ASUns32 macFileCreator;
} AVFileDescRec;
```

Description

Structure to handle file types and/or extensions in open and save dialogs.

Header File

AVExpT.h

Related Callbacks

None

Related Methods

AVAppChooseFolderDialog
AVAppOpenDialog
AVAppSaveDialog

Members

extension	Up to 32-character string for file extension. Use **\0** on Windows for don't care (ignored on Windows only if **\0** is used).
macFileType	File type; used on Macintosh only. Use **0** for don't care.
macFileCreator	File creator; used on Macintosh only. Use **0** for don't care.

AVFileFilterRec

```
typedef struct _t_AVFileFilterRec {
    ASText filterDescription;
    AVFileDescRec* fileDescs;
    ASUns16 numFileDescs;
} AVFileFilterRec;
```

Description

Structure to hold a series of file type descriptors that form a file filter for an open or save dialog.

Header File

AVExpT.h

Related Callbacks

Various

Related Methods

AVAppChooseFolderDialog
AVAppOpenDialog
AVAppSaveDialog

Members

filterDescription	Localized string describing this filter. It is the name that appears in the open or save dialog.
fileDescs	An array of **AVFileDescRec**. A single **AVFileFilterRec** can have as many **AVFileDescRec**s as needed. On Windows, the filename is concatenated with the extension string of the relevant **AVFileDescRec** in the **Open** and **Save** dialogs. On the Macintosh, the **fileDescription** string is used in the **File Open** and **Save** dialogs, and the **AVFileDescRec**s are used to filter which files are displayed when that **AVFileFilterRec** is selected.
numFileDescs	The number of **AVFileDescRec**s in **fileDescs**.

AVFullScreenMonitor

```
typedef ASEnum8 AVFullScreenMonitor;
enum {
    kAVFullScreenLargestIntersection,
    kAVFullScreenMostColors,
    kAVFullScreenWidest,
    kAVFullScreenTallest,
    kAVFullScreenLargest,
    kAVFullScreenMain,
    kAVFullScreen_END_ENUM
};
```

Description

Describes the preferred monitor to use when going full-screen on a multi-monitor system.

Header File

AVExpT.h

Related Methods

None

Members

kAVFullScreenLargestIntersection	Use the monitor with the largest intersection.
kAVFullScreenMostColors	Use the monitor with the most colors.
kAVFullScreenWidest	Use the monitor with the widest screen.
kAVFullScreenTallest	Use the monitor with the tallest screen.
kAVFullScreenLargest	Use the monitor with the largest screen.
kAVFullScreenMain	Use the monitor with the main screen.
kAVFullScreen_END_ENUM	Enum terminator.

AVIcon

```
#define AVIcon void*
```

Description

An icon on a menu item or toolbar button.

Header File

AVCalls.h

Related Callbacks

None

Related Methods

AVMenuItemNew
AVToolButtonGetIcon
AVToolButtonNew
AVToolButtonSetIcon

AVIconBundle

AVIconBundleRec

```
#if WIN_PLATFORM
typedef HICON AVIconBundleIconRef;
#elif MAC_PLATFORM
typedef IconSuiteRef AVIconBundleIconRef;
#else
typedef void* AVIconBundleIconRef;
#endif /* WIN_PLATFORM */
typedef struct _t_AVIconBundleRec {
    ASUns32 tag1;
    ASUns32 tag2;
    ASInt32 version;
    AVIconBundleIconRef grayIcon;
    AVIconBundleIconRef colorIcon;
} AVIconBundleRec, *AVIconBundle;
```

Description

An icon bundle allows you to gather up multiple icons and present them to Acrobat as a single **AVIcon**. For example, when creating a toolbar button you can pass in an icon bundle specifying both gray and color icons; the gray icon will be used to draw the button in its normal state, the color icon will be used to draw the button when the pointer is over it. The format for icon bundles is platform-specific (primarily since the format for **AVIcon**s is platform-specific). On Windows the icons are specified using HICONs, not HBITMAPs. On the Mac, they are **IconSuiteRef**, never SICN resources. The tags at the front are there so the implementation can determine beyond a shadow of a doubt that the information passed in is an icon bundle and not an Acrobat 4-compatible **AVIcon**.

Header File

AVExpT.h

Related Methods

None

Members

tag1	Set to **AVIC** (e.g., **bundle.tag1** = 'AVIC')
tag2	Set to **ONBU** (e.g., **bundle.tag2** = 'ONBU')
version	Set to version of app (e.g., **0x00050000** for Acrobat 5.0)

grayIcon	Defined according to the **typedef** shown above.
colorIcon	Defined according to the **typedef** shown above.

AVIdentity

```
typedef enum {
    kAVILoginName,
    kAVIName,
    kAVICorporation,
    kAVIEMail,
    kAVILast
} AVIdentity;
```

Description

Enumerated data type used to identify the properties of a user's identity.

Header File

AVExpT.h

Related Methods

AVIdentityGetText
AVIdentitySetText

AVInfoPanelUpdateType

```
typedef ASEnum8 AVInfoPanelUpdateType;
enum {
    kAVInfoPanelLock,
    kAVInfoPanelUnlock,
    kAVInfoPanelRect
};
```

Description

Constants for use with the **AVPageViewUpdateInfoPanel**.

Header File

AVExpt.h

Related Callbacks

None

Related Methods

AVPageViewUpdateInfoPanel

Members

kAVInfoPanelLock	Plug-in wishes to assume control over the output of the info panel.
kAVInfoPanelUnlock	Plug-in is transferring control back to Acrobat to update the info panel.
kAVInfoPanelRect	Plug-in is passing the values to Acrobat that should be displayed in the info panel.

AVOpenSaveDialogFlags

```
typedef ASUns32 AVOpenSaveDialogFlags;
enum {
    kAVOpenSaveAllowAllFlag = 1 << 0,
    kAVOpenSaveAllowMultiple = 1 << 1,
    kAVOpenSaveAllowForeignFileSystems = 1 << 2,
    kAVOpenSaveAllowSettingsButton = 1 << 3
};
```

Description

An enumerated list of open and save dialog flags.

Header File

AVExpT.h

Related Methods

None

Members

kAVOpenSaveAllowAllFlag	Use “All Files (*.*)” file filter for dialog. Meaningful only for an open dialog.
kAVOpenSaveAllowMultiple	Allow multiple files to be opened through this dialog. Meaningful only for an open dialog.
kAVOpenSaveAllowForeignFileSystems	Allow file systems other than the default to be used to open the file(s).
kAVOpenSaveAllowSettingsButton	Adds a Settings button to the dialog. Meaningful for open and save dialogs.

AVOpenSaveDialogParams

AVOpenSaveDialogParamsRec

```
typedef struct {
    ASSize_t size;
    AVOpenSaveDialogFlags flags;
    AVWindow parentWindow;
    ASText windowTitle;
    ASText actionButtonTitle;
    ASText cancelButtonTitle;
    ASFileSys initialFileSys;
    ASPathName initialPathName;
    const char* initialFileName;
    AVFileFilterRec** fileFilters;
    ASUns16 numFileFilters;
    AVOpenSaveDialogSettingsComputeEnabledProc
settingsComputeEnabledProc;
    AVOpenSaveDialogSettingsExecuteProc settingsExecuteProc;
    void* settingsProcData;
} AVOpenSaveDialogParamsRec, *AVOpenSaveDialogParams;
```

Description

A structure defining the properties and callbacks related to a file open/save dialog.

Header File

AVExpT.h

Related Methods

AVAppOpenDialog
AVAppSaveDialog
AVAppChooseFolderDialog

Members

size	The size of this structure. Set to **sizeof(AVOpenSaveDialogParamsRec)**.
flags	A bitwise OR of the **AVOpenSaveDialogFlags**.
parentWindow	Parent window of dialog (ignored on the Macintosh platform). May be **NULL**.

windowTitle	Title of dialog that is used for the prompt. May be **NULL** for default title.
actionButtonTitle	Title of action button (**Open**, **Save**, or **Choose**). May be **NULL** for default title.
cancelButtonTitle	Title of cancel button. May be **NULL** for default title
initialFileSys	May be **NULL** if flags does not contain **kAVOpenSaveAllowForeignFileSystems**.
initialPathName	Used to specify initial location or selection. May be **NULL** if default location or selection is acceptable.
initialFileName	Ignored (may be **NULL**) for **Open** and **ChooseFolder**. For **Save**, filename portion is used for edit field. May be **NULL** on Windows, but is required on the Mac.
fileFilters	Array of **AVFileFilterRecs**. Ignored (may be **NULL**) for ChooseFolder. May be **NULL** for **Open** ONLY if **kAVOpenSaveAllowAllFlag** is set.
numFileFilters	Number of **AVFileFilterRecs** in fileFilters.
settingsComputeEnabledProc	*(Optional)* Called to determine whether or not the **Settings** button should be enabled. May be **NULL**. Ignored if **kAVOpenSaveAllowSettingsButton** is not set.
settingsExecuteProc	Called when the user clicks on the (enabled) **Settings** button. May be **NULL**. Ignored if **kAVOpenSaveAllowSettingsButton** is not set.
settingsProcData	Data that is passed to the **settingsExecuteProc** callback. Ignored if **kAVOpenSaveAllowSettingsButton** is not set.

AVPageViewControlID

```
typedef ASEnum16 AVPageViewControlID;
enum {
    kAVPageViewZoomControl,
    kAVPageViewPageFlipControls,
    kAVPageViewPageNumberControl,
    kAVPageViewPageSizeControl,
    kAVPageViewSplitterBar,
    kAVPageViewHorizontalScrollBar,
    kAVPageViewVerticalScrollBar
    kAVPageViewGrayBorder /* New in Acrobat 5.0 */
};
```

Description

Used with **AVPageViewShowControl** to allow a plug-in author to turn on and off the controls shown in the status area at the bottom of a page view.

Header File

AVExpt.h

Related Callbacks

None

Related Methods

AVPageViewShowControl

Members

kAVPageViewZoomControl	The zoom control.
kAVPageViewPageFlipControls	The page flip control.
kAVPageViewPageNumberControl	The page number control.
kAVPageViewPageSizeControl	The page size control.
kAVPageViewSplitterBar	The splitter bar control.
kAVPageViewHorizontalScrollBar	The horizontal scroll bar control.
kAVPageViewVerticalScrollBar	The vertical scroll bar control.
kAVPageViewGrayBorder *(New in Acrobat 5.0)*	The gray border control.

AVPrefsType

Description

Enumerated data type containing the Acrobat viewer's preferences settings.

Header File

AVExpT.h

Related Methods

AVAppGetPreference
AVAppSetPreference

Members

avpAllowByteRangeRequests — **ASBool** *(Present only in version 5.0 and higher)*	If **true** (default), Acrobat, in conjunction with your browser, will use HTTP byte range requests in order to download specific parts of the PDF file that have been requested. Byte range requests allow for a better user experience of large PDF files in the browser.
avpAllowOpenFile — **ASBool**	If **true**, links or actions that might launch another application are allowed. If **false**, such links do nothing. Corresponds to the "Allow Open File" item in the General Preferences dialog box. See **avpSecureOpenFile**.
avpAntialiasGraphics — **ASBool**	Turns on or off anti-aliasing of graphics. Users can control the anti-aliasing of images and text from General Preferences with the Smooth Text & Images checkbox
avpAntialiasLevel — **ASInt16** *(Present only in version 3.0 and higher)*	Point size above which to use anti-aliasing.
avpAntialiasText — **ASBool** *(Present only in version 3.0 and higher)*	Turns on or off anti-aliasing, that is, text smoothing.
avpASExtensionDigCert — **ASExtensionEncryptedDigitalCertificateRec**	Currently unused.
avpBookmarkShowLocation — **ASBool**	If **true**, the bookmarks corresponding to the portion of the document currently being viewed are displayed in bold. If **false**, it is not.

avpBrowserCheck — **ASBool** *(Present only in version 5.0 and higher)*	If **true**, the application will run the browser self-healing code at initialization time. This code determines if the system is properly configured to run Acrobat in the browser, and if it is not, the code will ask the user whether she would like to automatically correct the problems that were found. If **false**, browser self-healing code is skipped.
avpBrowserIntegration — **ASBool** *(Windows only)*	If **true**, the **PDFViewer** plug-in is used to view PDF files opened inside a browser window. If **false**, the viewer is launched as a helper application to view the file.
avpCaseSensitive — **ASBool**	If **true**, the Acrobat viewer's Find command (not the Search plug-in) performs case-sensitive searches. If **false**, searches are not case-sensitive.
avpCurrCMM — **char***	Currently unsupported. Tracks what the current CMM is, for example, Apple ColorSync, Kodak, and so forth. Users can control this with the Color Manager part of the General Preferences dialog box.
avpDefaultOverviewType — **ASInt32**	Whether thumbnail images, bookmarks, or neither should be shown along with documents by default. Must be one of the **PDPageMode** values.
avpDefaultSplitterPos — **ASInt32**	The default width (in pixels) of the portion of the document window in which bookmarks and thumbnail images are displayed. The actual width can be changed by the user or programmatically using **AVDocSetSplitterPosition.**
avpDefaultZoomScale — **ASFixed**	Default magnification when a document is opened.
avpDefaultZoomType — **AVZoomType**	Default zoom type for a page view. Must be one of the **AVZoomType** values.
avpDestFitType — **char***	Currently unsupported. Default destination fit type used for bookmark and link creation. Must be one of the **View Destination Fit Types**.

avpDestZoomInherit — **ASBool**	If **true**, the default destination fit type for creating new links and bookmarks is “Inherit Zoom.” If **false**, it is not.
avpDisableAcrobatUpdate — **ASBool** *(Present only in version 5.0 and higher)*	Indicates whether the automatic Acrobat update feature is enabled (**true**) or disabled (**false**).
avpDisableWebServicesUpdate — **ASBool** *(Present only in version 5.0 and higher)*	Indicates whether the automatic Acrobat Web Services update feature is enabled (**true**) or disabled (**false**).
avpDoCalibratedColor — **ASBool**	If **true**, the Acrobat viewer renders using calibrated color. The chromaticity and gammas used are those set using **PDPrefSetColorCal**. If **false**, do not.
avpDoUpdate — **ASBool** *(Present only in version 5.0 and higher)*	If **true**, then Acrobat will do an automatic check for Acrobat Updates or Web Service updates if the last update value is larger than 1 week or 1 month, depending on the current setting for **avpUpdateFrequency**. If **false**, then Acrobat will not automatically check for Acrobat Updates or Web Service Updates.
avpDownloadEntireFile — **ASBool** *(Present only in version 3.0 and higher)*	If **true**, download entire PDF files in browser windows. If **false**, do not.
avpDrawMissingThumbs — **ASBool** *(Present only in version 5.0 and higher)*	If **true**, Acrobat will draw thumbnails for pages when no thumbnails are embedded in the document. If **false**, Acrobat will display gray rectangles for pages without embedded thumbnails.
avpEmitHalftones — **ASBool** *(Present only in version 3.0 and higher)*	If **true**, use halftones found in PDF files. If **false**, do not.
avpEnablePageCache — **ASBool**	**true** if the following page is rendered offscreen while the current page is viewed, improving performance when a document is viewed sequentially, **false** if no draw-ahead is used.
avpFullScreenChangeTimeDelay — **ASInt32**	Time (in seconds) to show each page when using automatic page changing in full-screen mode.

avpFullScreenClick — **ASBool** *(Present only in version 3.0 and higher)*	**true** if the page advances on a mouse click in full-screen mode, **false** otherwise.
avpFullScreenColor — **PDColorValue**	The background color to use when the Acrobat viewer is in full-screen mode.
avpFullScreenCursor — **ASInt16** *(Present only in version 3.0 and higher)*	Cursor behavior in full-screen mode (**0** = visible, **1** = hidden, **2** = hidden after delay).
avpFullScreenEscape — **ASBool** *(Present only in version 3.0 and higher)*	**true** if the Escape key exits full-screen mode, **false** otherwise.
avpFullScreenLoop — **ASBool**	**true** if the document's pages are displayed in a loop (rather than just once) when using full-screen mode, **false** otherwise.
avpFullScreenTransitionType — **char*** *(Present only in version 3.0 and higher)*	Default transition name.
avpFullScreenUsePageTiming — **ASBool** *(Present only in version 3.0 and higher)*	**true** if page timings are used to advance pages in full-screen mode, **false** otherwise.
avpFullScreenUseTimer — **ASBool** *(Present only in version 3.0 and higher)*	**true** if the page advances automatically in full-screen mode, **false** otherwise.
avpGreekLevel — **ASInt32**	Size, in points, below which text is greeked if **avpGreekText** is **true**.
avpGreekText — **ASBool**	If **true,** text smaller than **avpGreekLevel** is greeked (displayed as gray boxes). If **false**, all text is drawn, regardless of its size.
avpHideTabsCompletely — **ASBool** *(Present only in version 5.0 and higher)*	If **true**, hide viewer tabs completely. If **false**, don't.
avpHighlightColor — **PDColorValue**	Currently unsupported.

avpHighlightMode — **ASInt32** *(Used on Macintosh only)*	Specifies the way in which highlighted text is displayed. Must be one of the following: **HIGHLIGHT_PAINT_XOR** — Paint highlight color in XOR mode **HIGHLIGHT_INVERT_MAC** — Invert in special Macintosh highlight mode **HIGHLIGHT_INVERT_XOR** — Invert in XOR mode This preference exists because the standard Macintosh highlighting generally works quite well, but can occasionally become invisible when text is on a colored background.
avpHoveringPopups — **ASBool** *(Present only in version 5.0 and higher)*	If **true**, enables the new "automatically open pop-ups on mouse-over" feature. This means that moving the mouse over an annotation will cause any popup associated with that annotation to appear. When the mouse exits the annotation, the popup will disappear.
avpIgnorePageClip — **ASBool**	If **true,** the viewer ignores clipping paths that would cause a thin white border to appear around the edges of the page. If **false**, Acrobat honors all clipping paths.
avpLastAcrobatUpdateCheck — **ASUns32** *(Present only in version 5.0 and higher)*	Indicates an arbitrary time stamp for the last Acrobat Update check. If the update check frequency is every week or every month and the last update check was more than 1 week or 1 month ago, Acrobat will automatically check for updates. A value of **1** indicates that Acrobat should check for updates at the next launch.
avpLastWebServicesUpdateCheck — **ASUns32** *(Present only in version 5.0 and higher)*	Indicates an arbitrary time stamp for the last Acrobat Web Services check. If the update check frequency is every week or every month and the last update check was more than 1 week or 1 month ago, Acrobat will automatically check for Web Service updates. A value of **1** indicates that Acrobat should check for updates at the next launch.
avpMarkHiddenPages — **ASBool** *(Present only in version 3.0 and higher)*	Mark hidden (for Presenter plug-in) pages with the appropriate mark.

avpMaxCosDocCache — **ASInt32**	The maximum zoom factor at which pages will be cached. Pages viewed at a higher zoom factor will be not cached. A value of 1.0 corresponds to a zoom factor of 100%. NOTE: A platform-dependent minimum value for the cos cache is enforced. It is 2M for Windows and Unix and 500K for Mac. If a plug-in attempts to set the **maxCosDocCache** below the minimum, the plugin's setting is ignored and the minimum is used instead.
avpMaxOpenDocuments — **ASInt32** *(Present only in version 3.0 and higher)*	Maximum number of open documents allowed.
avpMaxPageCacheBytes — **ASInt32**	The maximum number of bytes the page cache is allowed to occupy.
avpMaxPageCacheZoom — **ASFixed**	The maximum zoom factor at which pages will be cached. Pages viewed at a higher zoom factor will not be cached. A value of 1.0 corresponds to a zoom factor of 100%.
avpMaxThreadZoom — **ASFixed**	The maximum zoom factor that is automatically used when the Acrobat viewer enters "Follow Article" mode. A value of **1.0** corresponds to a zoom factor of 100%.
avpMinimizeBookmarks — **ASBool**	If **true**, hide or minimize the Bookmarks panel after the user has selected a bookmark. If **false**, do not.
avpMinPageCacheTicks — **ASInt32**	The minimum number of ticks needed to redraw a page before it will be cached. Pages that can be redrawn in less time will not be cached. A tick is 1/60 of a second.
avpNoteColor — **PDColorValue**	Default color to use for new notes.
avpNoteFontName — **char*** *(Present only in version 3.0 and higher)*	Currently unsupported. Font name for text notes.
avpNoteFontSize — **ASInt32**	Font size for text notes.
avpNoteLabel — **char***	Currently unsupported. Default label to use for new notes.

avpNoteLabelEncoding — **void***	Indicates the script code (Mac OS) or charset (Windows) that the **avpNoteLabel** is encoded in. In both Mac OS and Windows, these codes are integers even though the preference is typed as **void***.
avpOpenAsPDFFilterIndex — **ASInt32** *(Present only in version 5.0 and higher)*	Indicates which filter will be used when the "Open As Adobe PDF" dialog is popped again. Use **-1** for All files.
avpOpenDialogAtStartup — **ASBool**	If **true,** the File Open dialog box is displayed when the Acrobat viewer is launched without a document to open. If **false**, it is not.
avpOpenInPlace — **ASBool**	If **true**, cross-document links should open in the same window. If **false**, open the file in another window.
avpOpenNewDocument — **ASBool** *(Present only in version 5.0 and higher)*	Controls the default selection for the radio button in the "Open As Adobe PDF" dialog. This dialog appears after you select, for example, a `.txt` file to be opened as a PDF. If **true**, the default selection will be "Create New Document". If false
avpOpenSaveAsFilterIndex — **ASInt32** *(Present only in version 5.0 and higher)*	Indicates which filter will be used when the "Save As" dialog is popped again. Use **-1** for All files.
avpOverrideAcrobatUpdateURL — **char*** *(Present only in version 5.0 and higher)*	null-terminated **char*** that overrides the default Acrobat Update website that is used to check for updates. This is probably only useful for enterprise installations that want to run their own Acrobat Update website.
avpPageUnits — **PageUnitsType**	Current units (**0** = points, **1** = inches, **2** = millimeters).
avpPageViewLayoutMode — **PDLayoutMode**	Default layout mode.
avpPersistentCacheFolder — **ASPathName**	Location of the Acrobat cache, which is used while viewing PDF files on a slow file system.
avpPersistentCacheSize — **ASInt32** *(Present only in version 3.0 and higher)*	Size of the Acrobat cache, which is used while viewing PDF files on a slow file system.

avpPrefsVersion — **ASInt32** *(Read only)*	The preferences file format version number.
avpPrintAnnots — **ASBool**	If **true**, prints annotations on the page (useful for summarize annotations that the user can control from the Print dialog box). If **false**, non-Forms annotations with appearances (that is, mark-up annotations) will never print.
avpPrintUsingWorkingSpaces — **ASBool** *(Present only in version 5.0 and higher)*	Whether the user last printed with the “Apply Color Working Spaces” checkbox set.
avpPSLevel — **ASInt32**	The PostScript language level to use when printing to a PostScript printer. Valid values are 1 and 2.
avpRecentFile1, avpRecentFile2, avpRecentFile3, avpRecentFile4 — **char*** *(Present only in version 3.0 and higher)*	Currently unsupported. Paths for most recently used files in recent file menu.
avpRememberDialogs — **ASBool**	If **true**, the Acrobat viewer remembers the location of certain dialog boxes (such as the Find dialog box) and displays them in their previous location. If **false**, they are displayed in a default location.
avpSaveAsLinearized — **ASBool**	If **true**, save as linearized file when saving. If **false**, do not save as linearized.
avpSecureOpenFile — **ASBool**	If **true**, links or actions that might launch another application are not allowed. A plug-in can set this preference to **true** to override the **avpAllowOpenFile** preference (that the user can control from the General Preferences dialog box). If **false**, such links are allowed.
avpSendFarEastFonts — **ASBool**	If **true**, Type0 fonts used in the PDF file are included in the PostScript file that is generated. If **false**, the fonts are not be downloaded and the printer must already have the appropriate font.

avpShortMenus — **ASBool** *(Ignored in Acrobat 3.0 or later)*	If **true**, the Acrobat viewer displays short menus. If **false**, it displays long menus. See **AVMenuItemNew** for information on specifying whether a menu item should be visible only when long menus are shown.
avpShowAnnotSequence — **ASBool**	If **true**, displays and prints annotation sequence numbers on annotations (useful for summarize annotations that the user can control from the Annotations Preferences dialog box). If **false**, do not.
avpShowHiddenAnnots — **ASBool** *(Present only in version 3.0 and higher)*	If **true**, shows the annotations marked as hidden. If **false**, such annotations are not displayed.
avpShowLargeImages — **ASBool**	If **true**, the Acrobat viewer displays large images. If **false**, gray boxes are shown in place of large images, reducing rendering time for pages with large images.
avpShowLeftToolBar — **ASBool**	Indicates whether the left toolbar is visible or invisible. In Windows, this controls the visibility of the toolbar at application launch. In Mac OS, this controls the visibility of the toolbar at the time a document is opened.
avpShowMenuBar — **ASBool**	Indicates whether the menubar is visible or invisible when the application first launches.
avpShowSplashAtStartup — **ASBool**	If **true**, the Acrobat viewer splash screen is shown when the Acrobat viewer is launched. If **false**, it is not.
avpShowToolBar — **ASBool**	If **true**, the Acrobat viewer's toolbar is displayed. If **false**, it is not. The toolbar can also be shown and hidden by the user.
avpShowUpdateDialog — **ASBool** *(Present only in version 5.0 and higher)*	Indicates whether the user wants to see the automatic update dialog at startup. Setting this to **false** means the dialog is not displayed—the update check will still occur silently in the background.
avpShrinkToFit — **ASBool**	If **true**, pages are shrunk to fit the image-able area of the printer when printed. If **false**, pages are not shrunk to fit.

avpSkipWarnings — ASBool	If **true**, a warning dialog box is not displayed when a user deletes notes, bookmarks, links, pages, or thumbnails. If **false**, the dialog box is displayed.
avpSubstituteFontType — ASInt32	Determines whether sans serif, serif, or both substitution fonts are available when printing. Using only one substitution font type generally reduces the quality of font substitution, but may allow some files that require font substitution to print on PostScript printers that have very little memory. Valid values are: 0 — Use both sans serif and serif 1 — Use sans serif only 2 — Use serif only
avpSuppressCSA — ASBool	Used by the PostScript print code to determine whether to emit color space arrays for 4- or 1-component ICCBased color spaces. If **true**, do not emit CSAs, instead emit **DefaultCMYK** or **DefaultGray**, respectively. The user may control this in Acrobat via **File -> DocInfo -> Prepress**.
avpThumbViewScale — ASFixed	The scale at which thumbnail images are created. The Acrobat viewer's default is **fixedEighth**, creating thumbnail images whose linear dimensions are one-eighth those of the actual page.
avpThumbViewTimeout — ASInt32	Currently unsupported.
avpTrustedMode — ASInt32	Indicates the level of trust required by Acrobat. When set to a non-zero value, Acrobat only loads plug-ins certified as "trusted", that is, plug-ins that respect the security settings of the document. Passing in **avpTrustedMode** to **AVAppGetPreference** always returns the trust level in effect when Acrobat was launched; it does not reflect the last value set by **AVAppSetPreference**, which will take effect when Acrobat is next launched.

avpTrustedModeOverride — **ASInt32**	When set to a non-zero value, this becomes the trust level the next time Acrobat is launched. This trust setting does not persist across sessions.
avpUpdateFrequency — **ASUns32**	Indicates whether Acrobat checks for updates every week, every month, or never. Valid values for this preference are: **#define CheckEveryWeek 1** **#define CheckEveryMonth 2** **#define CheckManually 3** The default is **CheckEveryMonth**
avpUseHostFont — **ASBool**	Currently unsupported.
avpUseLocalFonts — **ASBool**	If **true**, the viewer uses fonts installed on the user's system when displaying and printing documents. If **false**, the viewer only uses its local copy of the base 14 fonts when displaying documents. All other fonts will be fauxed or substituted.
avpUseLogicalPageNumbers — **ASBool**	If **true**, the page numbering information encoded in the document is used. If **false**, the viewer numbers pages using decimal numbers starting at 1.
avpUsingAreaBoxNames — **ASBool** *(Present only in version 5.0 and higher)*	Not currently used. Should always have a value of **false**. Provides a way of honoring the TrimBox, Bleedbox, and ArtBox fields in the page directory of a PDF file.
avpWholeWords — **ASBool**	If **true**, the Acrobat viewer's Find command (not the Search plug-in) matches only whole words. If **false**, the partial words are also matched.

AVRect

AVRectP

```
typedef struct _t_AVRect {
    ASInt16 left;
    ASInt16 top;
    ASInt16 right;
    ASInt16 bottom;
} AVRect, *AVRectP;
```

Description

Data structure representing a rectangle (a quadrilateral having only horizontal and vertical sides).

The AcroView coordinate system is defined so that (0,0) is at the top, **x** increases to the right, and **y** increases down (the same as GDI and QuickDraw but opposite to the PostScript language). An **AVRect** is defined so that its **top** is above its **bottom**, but this means that 0 < top < bottom.

Header File

AVExpT.h

Related Methods

Numerous

AVRect32

AVRect32P

```
typedef struct _t_AVRect32 {
    ASInt32 left;
    ASInt32 top;
    ASInt32 right;
    ASInt32 bottom;
} AVRect32, *AVRect32P;
```

Description

Data structure representing a rectangle (a quadrilateral having only horizontal and vertical sides).

The AcroView coordinate system is defined so that (0,0) is at the top, x increases to the right, and y increases down (the same as GDI and QuickDraw but opposite to the PostScript language). An **AVRect32** is defined so that its top is above its bottom, but this means that 0 < top < bottom.

Header File

AVExpT.h

Related Methods

Numerous

AVRectHandleType

```
typedef ASEnum8 AVRectHandleType;
enum {
    kAVRectHandleNone, /* no handle */
    kAVRectHandleTopLeft, /* top left */
    kAVRectHandleTopRight, /* top right */
    kAVRectHandleBottomRight, /* bottom right */
    kAVRectHandleBottomLeft, /* bottom left */
    kAVRectHandleTopMiddle, /* top middle */
    kAVRectHandleRightMiddle, /* right middle */
    kAVRectHandleBottomMiddle, /* bottom middle */
    kAVRectHandleLeftMiddle * left middle */
};
```

Description

An enumerated list of the types of **AVRect** handles.

Header File

AVExpT.h

Related Methods

Various

AVSpecialCategory

```
typedef enum {
    kAVSCUser,
    kAVSCApp,
    kAVSCLast
} AVSpecialCategory;
```

Description

Categories of special folders on the system. Used with folder types to locate folders. Note that some combinations of **AVSpecialCategory** and **AVSpecialFolder** are not valid. See **AVSpecialError** for a list of valid combinations.

Header File

AVExpT.h

Related Callbacks

None

Related Methods

AVAcquireSpecialFilePathName
AVAcquireSpecialFolderPathName

Members

kAVSCUser	User folders
kAVSCApp	Application folders
kAVSCLast	Often used to tag the end of an enumeration with a specific value.

AVSpecialError

```
typedef enum {
    kAVSEOkay,
    kAVSEInvalidCombination,
    kAVSEDoesntExist,
    kAVSECouldntCreate,
    kAVSEError
} AVSpecialError;
```

Description

Operation status codes for the special folder methods.

Header File

AVExpT.h

Related Callbacks

None

Related Methods

AVAcquireSpecialFilePathName
AVAcquireSpecialFolderPathName

Members

kAVSEOkay	No error.
kAVSEInvalidCombination	Invalid category/folder combination. See Valid Combinations, below.
kAVSEDoesntExist	File or directory doesn't exist.
kAVSECouldntCreate	File system error: directory couldn't be created.
kAVSEError	Some other generic error.

Valid Combinations

kAVSCUser/kAVSFRoot

kAVSCUser/kAVSFEBooks

kAVSCUser/kAVSFPreferences

kAVSCUser/kAVSFSequences

kAVSCUser/kAVSFMessages

kAVSCUser/kAVSFDocuments

kAVSCUser/kAVSFJavaScript

kAVSCUser/kAVSFStamps
kAVSCUser/kAVSFDictionaries
kAVSCApp/kAVSFRoot
kAVSCApp/kAVSFUpdate
kAVSCApp/kAVSFSequences
kAVSCApp/kAVSFJavaScript
kAVSCApp/kAVSFStamps
kAVSCApp/kAVSFDictionaries
kAVSCApp/kAVSFPlugIns
kAVSCApp/kAVSFSPPlugIns
kAVSCApp/kAVSFHelp
kAVSCApp/kAVSFMessages
kAVSCApp/kAVSFResource
kAVSCApp/kAVSFHelpLocale (Windows only)
kAVSCUser/kAVSFTemp
kAVSCUser/kAVSFHelpLocale (Windows only)

AVSpecialFolder

```
typedef enum {
    kAVSFRoot,
    kAVSFEBooks,
    kAVSFPreferences,
    kAVSFSequences,
    kAVSFDocuments,
    kAVSFJavaScript,
    kAVSFStamps,
    kAVSFDictionaries,
    kAVSFPlugIns,
    kAVSFSPPlugIns,
    kAVSFHelp,
    kAVSFTemp,
    kAVSFMessages,
    kAVSFResource,
    kAVSFUpdate,
    kAVSFHelpLocale,
    kAVSFLast
} AVSpecialFolder;
```

Description

Special folder types on the system. Used with folder categories to locate folders. Note that some combination of **AVSpecialCategory** and **AVSpecialFolder** are not valid. See tables below for detailed information. See **AVSpecialError** for a list of valid combinations.

Header File

AVExpT.h

Related Callbacks

None

Related Methods

AVAcquireSpecialFilePathName
AVAcquireSpecialFolderPathName

Members

kAVSFRoot (see table below for which is used)	*User root* Windows: Documents and Settings/<user>/Application Data/Acrobat *Viewer root* Location of the application. Sometimes needed to sniff for DLLs and other files that live at this level. Windows: Program Files/Adobe/Acrobat 5.0/<viewer>
kAVSFEbooks	*User eBook license files (RMF)* License files used by WebBUY to indicate ownership/rights of particular PDF documents. Windows: Documents and Settings/<user>/Application Data/Acrobat/EBook
kAVSFPreferences	*User preferences folder* Should contain files full of preferences (e.g., ini or Mac prefs files). Generally you don't want the user touching these. If a plug-in wants to provide regular preferences it should use the miIni.c interface which would map to pref files in this folder on the Mac and the registry on Windows. Windows: Documents and Settings/<user>/Application Data/Acrobat/Preferences
kAVSFSequences (see table below for which is used)	*User-defined batch sequences* Custom batch scripts that the user has written/defined and saved. Windows: Documents and Settings/<user>/Application Data/Acrobat/Sequences *Application batch sequences* Batch sequences that are shipped with the product as examples. Windows: Program Files/Adobe/Acrobat 5.0/<viewer>/Sequences/<locale>

kAVSFDocuments	*User documents folder* The viewer and all plug-ins should default to opening and saving in this folder. Windows: `Documents and Settings/<user>/My Documents`

kAVSFJavaScript
(see table below for which is used)
	User JavaScripts folder
	JavaScripts written by the user (`.js` files) that are loaded at application launch. These are editable directly by the user and as such are not usually found in the same folder as **kAVSFEBooks**, **kAVSFPreferences**, or **kAVSFSequences**.
	Windows:
	`Documents and Settings/<user>/My Documents/Acrobat/JavaScript`
	Application JavaScripts folder
	JavaScripts shipped with the product (`AForm.js`, `AFString<lang>.js`, `Annots.js`)
	Windows:
	`Program Files/Adobe/Acrobat 5.0/<viewer>/plug-ins/EScript/JavaScripts`

kAVSFStamps (see table below for which is used)	*User stamps folder* Custom rubber stamps that the user creates are stored in this folder. Windows: `Documents and Settings/<user>/My Documents/Acrobat/Stamps` *Application stamps folder* Stamps that are shipped with the product. Windows: `Program Files/Adobe/Acrobat 5.0/<viewer>/plug-ins/Annotations/Stamps`
kAVSFDictionaries (see table below for which is used)	*User-installed dictionaries* User-installed dictionaries for the spell checker. Windows: `Documents and Settings/<user>/My Documents/Dictionaries` *Application-installed dictionaries* Dictionaries that are shipped with the product. Windows: `Program Files/Adobe/Acrobat 5.0/<viewer>/plug-ins/Spelling/Dictionaries`

kAVSFPlugIns	*Application plug-ins folder* Where plug-ins are stored. Windows: Program Files/Adobe/Acrobat 5.0/<viewer>/plug-ins
kAVSFSPPlugIns	Suite Pea plug-ins folder.
kAVSFHelp	*Help folder* Application help. Windows: Program Files/Adobe/Acrobat 5.0/Help
kAVSFTemp	*Temporary folder* Windows: `Windows\Temp`
kAVSFMessages (see table below for which is used)	*User messages folder* Windows: `Documents and Settings/<user>/Application Data/Acrobat/Messages` *Application messages folder* Windows: *Program Files/Adobe/Acrobat 5.0/Messages*
kAVSFResource	*Resources folder*
kAVSFUpdate	*Update folder*
kAVSFHelpLocale (see table below for which is used)	*Downloaded Reader Help folder* Used to store the full Reader help file on systems that lock out access to the application help folder. Windows: `Documents and Settings/<user>/Application Data/Acrobat/Help/<Locale>` *Application help locale folder* Windows: `Program Files/Adobe/Acrobat 5.0/Help/<Locale>`
kAVSFLast	Enumeration terminator.

	kAVSCUser (see **AVSpecialCategory**)	**kAVSCApp** (see **AVSpecialCategory**)
kAVSFRoot	User root	Acrobat root
kAVSFEBooks	User eBook license files (RMF)	N/A

	kAVSCUser (see **AVSpecialCategory**)	**kAVSCApp** (see **AVSpecialCategory**)
kAVSFPreferences	User preferences folder	N/A
kAVSFSequences	User-defined batch sequences	Application batch sequences
kAVSFDocuments	User documents folder	N/A
kAVSFJavaScript	User JavaScripts	Application JavaScripts
kAVSFStamps	User stamps folder	Application stamps folder
kAVSFDictionaries	User-installed dictionaries	Application-installed dictionaries
kAVSFPlugIns	N/A	Plug-ins folder
kAVSFHelp	N/A	Help folder
kAVSFTemp	Temporary folder	N/A
kAVSFMessages	User messages folder	Default messages folder
kAVSFHelpLocale	Downloaded Reader Help folder	Application help locale folder

AVStatusMonitorProcs

AVStatusMonitorProcsRec

```
typedef struct _t_AVStatusMonitorProcs {
    ASSize_t size;
    ASProgressMonitor progMon;
    void *progMonClientData;
    ASCancelProc cancelProc;
    void *cancelProcClientData;
    ASReportProc reportProc;
    void *reportProcClientData;
} AVStatusMonitorProcsRec, *AVStatusMonitorProcs;
```

Description

A structure that contains a progress monitor, cancel procedure, and error report procedure.

Header File

AVExpT.h

Related Methods

AVConversionConvertToPDFWithHandler
AVConversionConvertFromPDFWithHandler
AVConversionConvertToPDF

Members

size	The size of this structure. Set to **sizeof(AVStatusMonitorProcsRec)**.
progMon	*(May be **NULL**)* The progress monitor. In general, clients of this structure test members for **NULL**. If a member is found, they don't do anything.
progMonClientData	The progress monitor client data that was acquired with the progress monitor.
cancelProc	*(May be **NULL**)* The cancellation procedure. In general, clients of this structure test members for **NULL**. If a member is found, they don't do anything.
cancelProcClientData	The cancellation procedure client data that was acquired with the cancellation procedure.

reportProc	*(May be **NULL**)* The report procedure. In general, clients of this structure test members for **NULL**. If a member is found, they don't do anything.
reportProcClientData	The report procedure client data that was acquired with the report procedure.

AVSystemFont

AVSystemFontRec

```
typedef struct _t_AVSystemFont {
    short fondID;
    short styleID;
    ASUns32 flags;
    ASAtom pdfFontName;
} AVSystemFontRec, *AVSystemFont;
```

Description

(Macintosh only, present only in version 3.0 or later) System font.

Header File

AVExpT.h

Related Methods

AVAppEnumSystemFonts

Members

fondID	Macintosh FOND id.
styleID	Macintosh style value: normal, italic, bold or bold | italic.
flags	Font flags. Must be one of **AVSystemFont Flags**.
pdfFontName	PostScript name or TrueType styled name.

AVSystemFont Flags

Description

Constants that are used to specify the attributes of an **AVSystemFont**.

Header File

AVExpT.h

Related Methods

AVAppEnumSystemFonts

kFontIsType1	Type 1 font.
kFontIsMMMaster	Multiple Master font.
kFontIsMMInstance	Multiple Master font (completely-specified instance).
kFontIsTrueType	True type font.
kFontIsCIDFontType0	Character ID Type 0 font.
kFontIsOCFType1	OCF Type 1 font.

AVTool

AVToolRec

```
typedef struct _t_AVTool {
    ASSize_t size;
    ActivateProcType Activate;
    DeactivateProcType Deactivate;
    DoClickProcType DoClick;
    AdjustCursorProcType AdjustCursor;
    DoKeyDownProcType DoKeyDown;
    GetTypeProcType GetType;
    IsPersistentProcType IsPersistent;
    ASInt32 cursorID;
    AVComputeEnabledProc ComputeEnabled;
    void* computeEnabledData;
    /* Added in Acrobat 4.0 */
    DoClickProcType DoRightClick;
    DoLeaveProcType DoLeave;
    GetSelectionServerProcType GetSelectionServer;
} AVToolRec, *AVTool;
```

Description

Data structure for a tool. It contains callbacks that implement the tool's functions (for example, handling mouse clicks and controlling the cursor shape).

Header File

AVExpT.h

Related Methods

AVAppGetActiveTool
AVAppSetActiveTool
AVAppGetDefaultTool
AVAppGetLastActiveTool
AVAppGetToolByName
AVAppRegisterTool
AVToolGetType
AVToolIsPersistent

Members

size	Size of the data structure. Must be set to **sizeof(AVToolRec)**.

cursorID	A default cursor, used if the tool does not have an **AdjustCursorProcType** callback.
computeEnabledData	User-supplied data to pass to the tool's **AVComputeEnabledProc** callback each time it is called.

AVToolBarDockPosition

```
typedef ASEnum8 AVToolBarDockPosition;
enum {
    kAVToolBarDockTop,
    kAVToolBarDockBottom,
    kAVToolBarDockLeft,
    kAVToolBarDockRight,
    kAVToolBarFloating
};
```

Description

An enumerated list of toolbar positions for registering the preferred position of a toolbar.

Header File

AVExpT.h

Related Methods

AVAppRegisterToolBarPosition

AVToolBarLayout

```
typedef ASEnum8 AVToolBarLayout;
enum {
    kAVToolBarHorizontal,
    kAVToolBarVertical,
    kAVToolBarTwoColumn
};
```

Description

An enumerated list of toolbar layouts.

Header File

AVExpT.h

Related Methods

AVAppRegisterToolBarPosition

AVToolBarPosition

AVToolBarPositionRec

```
typedef struct _t_AVToolBarPosition {
    ASSize_t size;
    ASBool inDoc;
    AVToolBarDockPosition dockPosition;
    const char *floatingWindowName;
    ASInt32 stackNum;
    ASInt32 offset;
    ASInt32 order;
    AVRect windowFrame;
    AVToolBarLayout layout;
    ASBool hidden;
    ASBool windowHidden;
} AVToolBarPositionRec, *AVToolBarPosition;
```

Description

A structure that describes the position of a toolbar.

Header File

AVExpT.h

Related Methods

AVAppRegisterToolBarPosition

Members

size	The size of this structure. Set to **sizeof (AVToolBarPositionRec)**.
inDoc	Specifies that the toolbar is to be in-doc (not shared). If **inDoc** is **true**, **dockPosition** cannot be floating.
dockPosition	The edge of the document window or monitor to attach this toolbar to.
floatingWindowName	If the toolbar is to be floating you can group it with another toolbar by specifying a name for the floating window. You can set this to a constant string.
stackNum	The stack to insert the toolbar on. Make this **-1** to open a new stack on the left or top, or **ASMAXInt32** to open a new stack on the right or bottom.

offset	The number of pixels from the top or left edge of the stack from which to position the toolbar. If **ASMAXInt32**, the toolbar will be positioned snugly behind other toolbars on the stack. If **-1**, it will be positioned at the front.
order	If multiple positions specify an offset of **-1** or **ASMAXInt32**, this field is used to further order them. It controls the order in which the bars will be placed, not the visual order on-screen. If, for example, two bars have an offset of **-1**, the one associated with the value in the lower **order** field will be positioned first at the front of the bar. Then the one associated by the value in the higher **order** field also will be positioned at the front of the bar, but pushing the first one to the right.
windowFrame	If the toolbar isn't **inDoc** and **dockPosition** is floating, you may end up creating a new window. Here's its frame.
layout	If a new window is called for, here's its layout.
hidden	Set this to **true** if the toolbar should be hidden by default.
windowHidden	Set this to **true** if the floating window in which the toolbar is located should be hidden by default.

AVTransHandler

AVTransHandlerRec

```
typedef struct _t_AVTransHandler {
    ASSize_t size;
    AVTransHandlerGetTypeProc GetType;
    AVTransHandlerExecuteProc Execute;
    AVTransHandlerGetUINameProc GetUIName;
    AVTransHandlerGetItemUINameProc GetItemUIName;
    AVTransHandlerInitTransDictProc InitTransDict;
    AVTransHandlerCompleteTransDictProc CompleteTransDict;
    /* The following callbacks are for non-standard plug-ins
    that have additional information */
    AVTransHandlerDoPropertiesProc DoProperties;
    AVTransHandlerGetInstructionsProc GetInstructions;
    AVTransHandlerGetButtonTextProc GetButtonText;
    AVTransHandlerGetStringOneTextProc GetStringOneText;
    AVTransHandlerGetStringTwoTextProc GetStringTwoText;
} AVTransHandlerRec, *AVTransHandler;
```

Description

Data structure containing callbacks that implement a transition handler. The callbacks implement the transition handler functions.

Header File

AVExpT.h

Related Methods

AVAppRegisterTransHandler

Members

size	Size of the data structure. Must be set to **sizeof(AVTransHandlerRec)**.

AVTransitionPort

AVTransitionPortRec

```
typedef struct _t_AVTransitionPort {
    void *reserved;
    AVRect32 rect32; /* Reserved. Do not alter. */
    /* The following two fields vary by platform */
    #if WIN_PLATFORM
    HDC hDC;
    RECT rect;
    #elif MAC_PLATFORM
    GWorldPtr port;
    Rect rect;
    #elif UNIX_PLATFORM
    void* port;
    void* rect;
    #endif
} AVTransitionPortRec *AVTransitionPort;
```

Description

Platform-dependent data structure for a transition.

In general, a transition port specifies a bitmap and a rectangle describing the portion of the bitmap affected by the transition. The transition handler's **AVTransHandlerExecuteProc** callback must copy all the bits from the source port's bitmap within the source port's rectangle to the area in the destination port's bitmap described by the destination port's rectangle. The source and destination ports' rectangles are guaranteed to be equal in size.

Header File

AVExpT.h

Related Callbacks

AVTransHandlerExecuteProc

AVWindow Flags

Description

Constants that are used to specify the attributes of an **AVWindow** when it is created.

Header File

AVExpT.h

Related Methods

AVWindowNew
AVWindowNewFromPlatformThing

Members

AVWIN_RESIZEABLE	Window can be resized. UNIX — Under OpenWindows, all windows have resize corners regardless of the setting of this flag.
AVWIN_HASCLOSEBOX	Window has a close box.
AVWIN_HASZOOMBOX	Window has a zoom box. UNIX — This flag only adds a Maximize decoration for non-floating windows under mwm, not for floating or modal windows. No instruction regarding zoom boxes is being set for OpenWindows; the “Full Size” instruction only makes windows full-height, not full-width.
AVWIN_HASMINIMIZEBOX	Window has a minimize box.
AVWIN_HASDRAGBAR	Window has a drag bar.
AVWIN_AUXILIARY	Window is an *auxiliary* window. Such windows pass menu commands that have not been handled to the front-most document window. For example, the **Find** dialog box is auxiliary; menu items like **Save**, **Close**, and so on should still be enabled. A window that does not purport to operate on the topmost document window (for example, an “Establish Connection to Library of Congress” dialog) would probably not be auxiliary.
AVWIN_WANTSKEY	The Acrobat viewer may freely assign key status to this window, if appropriate. At any time after the window has been created, this flag may be set or cleared using **AVWindowSetWantsKey**.
AVWIN_SMALLTITLEBAR	*(New for Acrobat 5.0)* Window has a small title bar.

AVWindowHandler

```
typedef struct _t_AVWindowHandler {
    ASSize_t size;
    AVWindowMouseDownProc MouseDown;
    AVWindowWillCloseProc WillClose;
    AVWindowDidCloseProc DidClose;
    AVWindowDidActivateProc DidActivate;
    AVWindowDidBecomeKeyProc DidBecomeKey;
    AVWindowKeyDownProc KeyDown;
    AVWindowWillResignKeyProc WillResignKey;
    AVWindowWillDeactivateProc WillDeactivate;
    AVWindowDrawProc Draw;
    AVWindowWillBeResizedProc WillBeResized;
    AVWindowPerformEditOpProc PerformEditOp;
    AVWindowCanPerformEditOpProc CanPerformEditOp;
    AVWindowAdjustCursorProc AdjustCursor;
    AVWindowDidResizeProc DidResize;
    /* New in Acrobat 4.0 */
    AVWindowDestroyPlatformThingProc DestroyPlatformThing;
} AVWindowHandlerRec, *AVWindowHandler;
```

Description

Data structure containing callbacks that implement a window handler. The callbacks implement the window handler functions. For example, resize the window, draw its contents, handle mouse clicks, handle key presses. **NULL** values are acceptable; default behavior is then used.

Header File

AVExpT.h

Related Methods

AVWindowNew
AVWindowNewFromPlatformThing

Members

size	Size of the data structure. Must be set to **sizeof(AVWindowHandlerRec)**.

AVWindowLayer

Description

Constants that specify the layer in which a newly-created **AVWindow** is to appear.

Header File

AVExpT.h

Related Methods

AVWindowNew
AVWindowNewFromPlatformThing

Members

AVWLnonfloating	Regular window, such as a document window.
AVWLfloating	Floating window, such as a palette.
AVWLmodal	Modal dialog.
AVWLpopup	*(New in Acrobat 5.0)* Tool-tip window with a one-pixel border.

AVZoomType

```
typedef enum _t_AVZoomType {
    AVZoomNoVary,
    AVZoomFitPage,
    AVZoomFitWidth,
    AVZoomFitHeight,
    AVZoomFitVisibleWidth,
    AVZoomPreferred,
    AVZoomReflowWidth /* New in 5.0 */
} AVZoomType;
```

Description

Enumerated data type. Specifies the zoom strategy that Acrobat is to follow.

Header File

AVExpT.h

Related Methods

AVPageViewZoomTo
AVPageViewGetZoomType

Members

AVZoomNoVary	No variable zoom (that is, **zoom** is a fixed value such as 1.0 for 100%).
AVZoomFitPage	Fits the page to the window.
AVZoomFitWidth	Fits the page width to the window.
AVZoomFitHeight	Fits the page height to the window.
AVZoomFitVisibleWidth	Fits the width of the portion of the page upon which marks are made to the window.
AVZoomPreferred	Uses the page's preferred zoom.
AVZoomReflowWidth	*(New in Acrobat 5.0)* Reflow page to window width.

Character Type Codes

Description

Constants that specify a character's type (uppercase, lowercase, number, punctuation, and so forth).

Header File

PDExpT.h

Related Methods

PDWordGetCharacterTypes
PDWordSplitString
PDWordFilterString

Character Type	Description
W_CNTL	A control code.
W_LETTER	A lowercase letter.
W_UPPERCASE	An uppercase letter.
W_DIGIT	A digit.
W_PUNCTUATION	A punctuation mark.
W_HYPHEN	A hyphen.
W_SOFT_HYPHEN	A hyphen that is only present because a word is broken across two lines of text.
W_LIGATURE	A ligature.
W_WHITE	A white space glyph.
W_COMMA	A comma (commas and periods are treated separately from other punctuation marks because they are used both as word punctuation marks and as de-limiters in numbers, and need to be treated differently in the two cases).
W_PERIOD	A period.
W_ACCENT	An accent mark.
W_UNMAPPED	A glyph that cannot be represented in the destination font encoding.

Character Type	Description
W_END_PHRASE	An end-of-phrase glyph (for example, ".", "?", "!", ":", and ";").
W_WILD_CARD	A wildcard glyph (for example, "*" and "?") that should not be treated as a normal punctuation mark.
W_WORD_BREAK	A glyph that acts as a delimiter between words (see **Glyph Names of Word Separators**).

Command Keys

Description

These strings are used as keys when accessing **AVCommand** **ASCab**s.

Header File

AVExpT.h

Related Types

None

Related Methods

None

Strings

kAVCommandKeyPDDoc	Use the string **AVDoc** as a key.
kAVCommandKeyAVDoc	Use the string **PDDoc** as a key.
kAVCommandKeyBaseFileName	Use the string **BaseFileName** as a key.
kAVCommandKeyOrigExtension	Use the string **OrigExtension** as a key.
kAVCommandKeyGenericTitle	Use the string **GenericTitle** as a key.
kAVCommandKeyTitle	Use the string **Title** as a key.
kAVCommandKeyParams	Use the string **Params** as a key.
kAVCommandKeyParamsDesc	Use the string **ParamsDesc** as a key.
kAVCommandKeyCanDescribeParams	Use the string **CanDescribeParams** as a key.
kAVCommandKeyCanBatch	Use the string **CanBatch** as a key
kAVCommandKeyCanShowDialog	Use the string **CanShowDialog** as a key.
kAVCommandKeyGroupTitle	Use the string **GroupTitle** as a key.

CosDocCreate Flags

Description

Flags used to specify the attributes of a **CosDoc** when it is created by **CosDocCreate**.

Header File

CosExpT.h

Related Methods

CosDocCreate

cosDocCreateInfoDict	Indicates if an info dictionary should be created for the document.

CosDocOpenParams

```
typedef struct _t_CosDocOpenParams {
    ASSize_t size;
    ASUns32 openFlags;
    ASFileSys fileSys;
    ASPathName pathName;
    const char* headerString;
} CosDocOpenParamsRec, *CosDocOpenParams;
```

Description

Parameters used when saving a file using **CosDocOpenWithParams**.

Header File

CosExpT.h

Related Methods

CosDocOpenWithParams

Members

size	Size of the data structure. Must be set to **sizeof(CosDocOpenParamsRec).**
openFlags	Bit field of flags indicating how to open the file. **kCosDocOpenDoRepair** — Repair the file if necessary.
fileSys	The **ASFileSys** with which the file is opened. May be **NULL** if using the default file system.
pathName	*(Required)* The **ASPathName** of the file to open.
headerString	Expected header string in file, for example, “%FDF-”; if **NULL**, assumes “%PDF-”

CosDocSave Flags

Description

Flags used to specify the attributes of a **CosDoc** when it is saved by **CosDocSaveToFile**.

Header File

CosExpT.h

Related Methods

CosDocSaveToFile

cosSaveGarbageCollect	Indicates whether to delete un-referenced objects before the save.
cosSaveFullSave	Indicates whether to write all objects, not just changes.
cosSaveBinaryOK	Indicates if binary data can be stored in the file.

CosDocSaveParams

CosDocSaveParamsRec

```
typedef struct _t_CosDocSaveParams {
ASSize_t size;
char* header;
char* cryptData;
ASInt32 cryptDataLen;
ProgressMonitor mon;
void* monClientData;
ASInt32 cryptVersion;
} CosDocSaveParamsRec, *CosDocSaveParams;
```

Description

Parameters used when saving a file using **CosDocSaveToFile** and **CosDocSaveWithParams**.

Header File

CosExpT.h

Related Methods

CosDocSaveToFile
CosDocSaveWithParams

Members

size	Size of the data structure. Must be set to **sizeof(CosDocSaveParamsRec).**
header	Complete header string, such as, “%FDF-1.0”.
cryptData	The encryption key to pass into the **PDCryptHandler** if security has been set on the document.
cryptDataLen	Length of the encryption key, in bytes. Cannot be greater than 5.
mon	Progress monitor. Use **AVAppGetDocProgressMonitor** to obtain the default progress monitor.
monClientData	Pointer to user-supplied data to pass to **mon** each time it is called.

cryptVersion	The Cos crypt version—the version of the algorithm that is used to encrypt and decrypt document data. **cryptVersion** equal to 0 is treated as **cryptVersion** equal to 1 to maintain backward compatibility.

Cos Object Types

Description

Constants that specify a Cos object's type (string, number, dictionary,…).

Header File

CosExpT.h

Related Methods

CosObjGetType

Object type	Description
CosNull	A **NULL** object, or an invalid object.
CosInteger	An integer object.
CosFixed	A fixed number object.
CosBoolean	An **ASBool** object.
CosName	A name object.
CosString	A string object.
CosDict	A dictionary object.
CosArray	An array object.
CosStream	A stream object.

CosStreamOpenMode

Description

Enumerated data type. Specifies whether or not filters and decryption should be applied to the stream's data.

Header File

CosExpT.h

Related Methods

CosStreamOpenStm

Mode	Description
cosOpenRaw	The data will be neither filtered nor decrypted.
cosOpenUnfiltered	The data will be decrypted but not filtered.
cosOpenFiltered	The data will be both decrypted and filtered. (This is the usual case.)

Emit Flags

Description

Enumerated data types used to specify additional print emit options.

Header File

AVExpT.h

Related Types

AVDocPrintParams

Related Methods

AVDocPrintPagesWithParams

kAVEmitHalftones	Emit the halftones specified in the document.
kAVEmitSeparableImagesOnly	Raise an error on images that cannot be represented in EPS files, following the separation conventions in Technical Note #5044, *Color Separation Conventions for PostScript Language Programs*.
kAVSuppressCropClip	Do not emit the cropbox page clip.
kAVSuppressTransfer	Do not emit the transfer functions in the document.
kAVSuppressBG	Do not emit the BlackGeneration in the document.
kAVSuppressUCR	Do not emit the UnderColorRemovals in the document.
kAVSuppressCJKFontSubst	If the field is set, calls to **AVDocPrintPagesWithParams** generate PostScript that suppresses printer-based font substitution for CJK fonts.
kAVSuppressRotate	*(New for 5.0)* Do not rotate the page.
kAVSuppressCenter	*(New for 5.0)* Do not center the page.
kAVSuppressAnnots	*(New for 5.0)* Do not emit text annotations.
kAVSetPageSize	*(New for 5.0)* Enable setPageSize, choose paper tray by PDF page size.
kAVSaveVM	*(New for 5.0)* Attempt to reduce amount of VM used on PostScript printers.

kAVOptimizeForSpeed	*(New for 5.0)* PostScript only - If set, PostScript is optimized for speed otherwise pages must be independent.
kAVSilent	*(New for 5.0)* When printing via Windows' Dynamic Data Exchange (DDE), alerts are not generated; **false** is returned.
kAVEmitBBoxClip	*(New for 5.0)* Normally, we emit a clip to BoundingBox for EPS, for one client, this breaks their workflow.
kAVEmitTransferFuncs	*(New for 5.0)* When set, transfer functions in the PDF file will be emitted to the PostScript output stream.
kAVPrintICCColorsAsDevice	*(New for 5.0)* When set, this flag causes special handling of 1 and 4 component ICC profiles, the same as that done when the "Print ICC colors as Device colors" checkbox is set in the Advanced print dialog. NOTE: Don't convert the ICC profile to a color space array when printing PostScript with PostScript color management on.
kAVApplyOverPrint	*(New for 5.0)* When set, the print path behaves as if the user had clicked the **Apply Overprint Preview** checkbox in the Advanced print dialog.
kAVApplyWorkingColorSpaces	*(New for 5.0)* When set, the print path behaves as if the user had clicked the **Apply Working Color Spaces** checkbox in the Advanced print dialog.

EmitFontOptions

Description

Enumerated data types used to specify options for printing a file to PostScript.

Header File

AVExpT.h

Related Types

AVDocPrintParams

Related Methods

AVDocPrintPagesWithParams

kAVEmitFontNoFonts	*(Obsolete after Acrobat 3.0)* Embed no fonts.
kAVEmitFontAllEmbType1	*(Obsolete after Acrobat 3.0)* Embed all Type 1 embedded fonts.
kAVEmitFontAllType1	*(Obsolete after Acrobat 3.0)* Embed all Type 1 fonts.
kAVEmitFontEmbeddedFonts	Emit all embedded fonts.
kAVEmitFontAllFonts	Emit all fonts.

ExternalDocServerCreationData

ExternalDocServerCreationDataRec

```
typedef struct _t_ExternalDocServerCreationData {
ASSize_t size;
ExternalDocWindowData platformWindow;
AVExecuteProc acrobatProc;
void* acrobatProcData;
CrossDocLinkProc crossDocLinkProc;
void* crossDocLinkProcData;
AVSetMessageProc setMessage;
void* setMessageProcData;
/* New for Acrobat 3.01 */
CrossDocLinkWithDestProc crossDocLinkWithDestProc;
void* crossDocLinkWithDestData;
/* New for Acrobat 5.0 */
AVSetFocusProc setFocus;
void* setFocusProcData;
} ExternalDocServerCreationDataRec,
*ExternalDocServerCreationData;
```

Description

Data for an **AVDoc** in an external window. Platform-dependent structure used in **AVDocOpenParams** when opening an **AVDoc** with **AVDocOpenFromASFileWithParams**, **AVDocOpenFromFileWithParams**, or **AVDocOpenFromPDDocWithParams**.

Header File

AVExpT.h

Related Methods

AVDocOpenFromASFileWithParams
AVDocOpenFromFileWithParams
AVDocOpenFromPDDocWithParams

Members

size	Size of the data structure. Must be set to **sizeof(ExternalDocServerCreationDataRec)**

platformWindow	Platform-dependent structure of type **ExternalDocWindowData** representing a window. • Macintosh — **ExternalDocWindowData** structure • Windows — **HWND** cast as **ExternalDocWindowData** • UNIX — **Widget** cast as **ExternalDocWindowData**
acrobatProc	Optional callback. Called when the “Acrobat button” (if present) is clicked in the external application.
acrobatProcData	Client-specified data for **acrobatProc**.
crossDocLinkProc	Callback to call when a cross-document link occurs.
crossDocLinkProcData	Client-specified data for **crossDocLinkProc**.
setMessage	Currently unused.
setMessageProcData	Currently unused. Client-specified data for **setMessage**.
crossDocLinkWithDestProc	Callback to call when a cross-document link occurs.
crossDocLinkWithDestData	Client-specified data for **crossDocLinkWithDestProc**.
setFocus	*(New in Acrobat 5.0)* Callback to call when Acrobat wishes to return focus to the browser displaying the document.
setFocusProcData	*(New in Acrobat 5.0)* Client-specified data for **setFocus**.

ExternalDocWindowData

ExternalDocWindowDataRec

```
typedef struct _t_ExternalDocWindowData {
ExternalDocWindowRefData ref;
AVSetCursorProc setCursor;
void* setCursorProcData;
} ExternalDocWindowDataRec, *ExternalDocWindowData;
```

Description

Data for an **AVDoc** in an external window. Platform-dependent structure used in **ExternalDocServerCreationData** when opening an **AVDoc** with **AVDocOpenFromASFileWithParams**, **AVDocOpenFromFileWithParams**, or **AVDocOpenFromPDDocWithParams**.

In Mac OS, a plug-in must handle events that effect the window, such as resize and mouse events.

Header File

AVExpT.h

Related Methods

AVDocOpenFromASFileWithParams
AVDocOpenFromFileWithParams
AVDocOpenFromPDDocWithParams

Members

ref	Pointer to external window data. Must be of type **ExternalDocWindowRefData**.
setCursor	Callback for handling mouse-related events, such as mouse down or mouse movement.
setCursorProcData	Optional client-specified data for **setCursor**.

ExternalDocWindowRefData

ExternalDocWindowRefDataRec

```
typedef struct _t_ExternalDocWindowRefData {
/* All of these values are handled through dereferences */
WindowPtr* window;
ASUns32* x;
ASUns32* y;
ASUns32* width;
ASUns32* height;
Rect* clip;
ASInt32* portx;
ASInt32* porty;
} ExternalDocWindowRefDataRec, *ExternalDocWindowRefData;
```

Description

(Macintosh only) Data for an external window. Platform-dependent structure used in **ExternalDocWindowData** when opening an **AVDoc** with **AVDocOpenFromASFileWithParams**, **AVDocOpenFromFileWithParams**, or **AVDocOpenFromPDDocWithParams**.

Coordinates specified in this structure are in application space. Use **AVRectToRect** to translate from user space to device space coordinates, then use the Macintosh **GlobalToLocal** function to translate from device space coordinates to application space coordinates.

Header File

AVExpT.h

Related Methods

AVDocOpenFromASFileWithParams
AVDocOpenFromFileWithParams
AVDocOpenFromPDDocWithParams

Members

window	**WindowPtr** for the external window.
x	x-displacement in application space coordinates from the application's window to the **AVPageView** in which Acrobat renders the PDF file.

y	y-displacement in application space coordinates from the application's window to the **AVPageView** in which Acrobat renders the PDF file.
width	Width of external window, specified in device space units.
height	Height of external window, specified in device space units.
clip	Clipping rectangle (Macintosh **Rect**) for external window in application space units. Usually the entire window.
portx	x-displacement in application space coordinates from the **AVPageView** in which Acrobat renders the PDF file to the actual PDF file page. Should usually be 0.
porty	y-displacement in application space coordinates from the **AVPageView** in which Acrobat renders the PDF file to the actual PDF file page. Should usually be 0.

Font Flags

Description

Constants that indicate a font's attributes (fixed width, roman or symbolic, sans serif, and so forth).

Header File

PDExpT.h

Related Methods

Part of the **PDFontMetricsP** structure used by **PDFontGetMetrics** and **PDFontSetMetrics**.

Members

PD_FIXED_WIDTH	All glyphs in the font are the same width.
PD_SERIF	The font is a serif font.
PD_PI	The font is a symbolic (pi) font.
PD_SCRIPT	The font is a script font.
PD_STD_ENCODING	The font uses standard encoding.
PD_ITALIC	The font is an italic font.
PD_ALL_CAP	The font is an all-caps font.
PD_SMALL_CAP	The font is a small caps font.
PD_FORCE_BOLD	Force bold characters to draw bold even at small point sizes.

gExtensionID

Description

A global variable containing an unique identifier for the plug-in.

Header File

`PICommon.h`

Related Methods

Any method needing to identify the plug-in.

gResFile

Description

(Macintosh only) A global variable containing the file reference number for the plug-in's file. This is needed with version 2.1 or later of the Acrobat viewers because the plug-in's resource file is not placed at the top of the resource chain automatically. See the Macintosh chapter of Technical Note #5167, *Acrobat Development Overview*, for further information.

Header File

PICommon.h

Related Methods

Any method needing to identify the plug-in.

Example

```
short oldResFile;
DialogPtr myDialog;

oldResFile = CurResFile();
UseResFile(gResFile);
myDialog = GetNewDialog(23,NULL,(Ptr) -1);
useResFile(oldResFile);
```

HFTs

Description

Global variables for each of the Acrobat viewer's built-in **HFT**s. These are needed when replacing a method or calling a replaced method.

Header File

PIMain.h

Related Methods

HFTReplaceEntry
HFTGetReplacedEntry

When replacing a method from the API section …	HFT must be…
AVModel	**gAcroViewHFT**
PDModel	**gPDModelHFT**
AcroSupport	**gAcroSupportHFT**
Cos	**gCosHFT**
Macintosh-specific	**gMacintoshHFT**
UNIX-specific	**gUnixHFT**
Windows-specific	**gWinHFT**

HFTEntry

```
typedef void* HFTEntry;
```

Description

A single entry in an **HFT**.

An **HFTEntry** may be cast to a pointer to a function whose prototype must be provided by the **HFT**'s description file.

Header File

CoreExpT.h

Related Methods

HFTReplaceEntry
HFTGetReplacedEntry

HFTEntryReplaceable

Description

A flag that specifies whether or not an **HFT** entry is replaceable.

If set, the new entry can be replaced. Plug-ins should generally use this value, allowing other plug-ins to subsequently replace the method again.

If not set, the new entry cannot be replaced.

Header File

CoreExpT.h

Related Methods

HFTReplaceEntry

HiliteEntry

```
typedef struct _t_HiliteEntry {
ASUns16 offset;
ASUns16 length;
} HiliteEntry;
```

Description

Data structure representing a single entry (starting location and length) in a highlight list.

Header File

PDExpT.h

Related Methods

PDTextSelectCreatePageHilite
PDTextSelectCreateWordHilite

Modifier Keys

Description

Constants corresponding to various keyboard modifier keys.

Header File

AVExpT.h

Related Methods

AVSysGetModifiers
AVMenuItemGetShortcut
AVMenuItemNew

Constant Type	Macintosh	Windows
AV_OPTION	Option key	Ctrl key
AV_COMMAND	Command key	—
AV_CONTROL	Control key	Ctrl key
AV_SHIFT	Shift key	Shift key
AV_EXTENDED *(New in Acrobat 5.0)*	right-alt,right-ctrl or Enter on enhanced keyboards	right-alt,right-ctrl or Enter on enhanced keyboards

Page Specification

Description

Enumerated data type. Can be used wherever a page number or range or count is required.

Header File

PDExpT.h

Related Methods

Various **PDDoc** methods.

Flag	Value	Description
PDBeforeFirstPage	**-1**	Page before the first page.
PDLastPage	**-2**	Last page.
PDAllPages	**-3**	All pages of a document.
PDOddPagesOnly	**-4**	Odd pages of a document.
PDEvenPagesOnly	**-5**	Even pages of a document.

PDAnnotArray

PDAnnotArrayRec

```
typedef struct _s_PDAnnotArray
{
    ASInt32 annotCount;
    PDAnnot* annots;
} PDAnnotArrayRec, *PDAnnotArray;
```

Description

Used by **PDDocExportSomeNotes**; represents an array of **PDAnnot**s.

Header File

PDExpT.h

Related Methods

PDDocExportSomeNotes

Members

annotCount	Annotation count.
annots	Pointer to an array of **PDAnnot**s.

PDAnnot Flags

Description

Constants that indicate annotation properties.

NOTE: These flags are *not* the ones used in the **flags** field of the **AVAnnotHandler** structure.

Header File

PDExpT.h

Related Methods

PDAnnotGetFlags
PDAnnotSetFlags

Members

pdAnnotInvisible	Controls whether the annotation is invisible—or is drawn with the missing handler icon—if its handler is not available.
pdAnnotHidden	Controls whether the annotation should be drawn—whether its handler is present or not.
pdAnnotPrint	Controls whether the annotation is printed or not. To be printed, an annotation must have an Appearance (**AP**) key.
pdAnnotNoZoom	If set, the annotation does not zoom with the page view.
pdAnnotNoRotate	If set, the annotation does not rotate with the page.
pdAnnotNoView	If set, the annotation is not viewed but can be printed.
pdAnnotReadOnly	If set, the annotation does not interact with the user.

PDAnnotHandler

PDAnnotHandlerRec

```
typedef struct _t_PDAnnotHandler {
ASSize_t size;
void* userData;
PDAnnotHandlerGetTypeProc GetType;
PDAnnotHandlerGetAnnotInfoProc GetAnnotInfo;
PDAnnotHandlerDeleteAnnotInfoProc DeleteAnnotInfo;
PDDocWillExportAnnotProc WillExportAnnot;
PDDocWillImportAnnotProc WillImportAnnot;
PDAnnotWillPrintProc WillPrintAnnot;
PDAnnotHandlerGetAnnotInfoFlagsProc GetAnnotInfoFlags;
} PDAnnotHandlerRec, *PDAnnotHandler;
```

Description

Data structure containing callbacks that implement an annotation manager. The callbacks implement the annotation manager functions. For example, view, delete, or export the annotations of a document as a list, sorted by type, author, or date.

To fully use a **PDAnnotHandler**, the **AVAnnotHandler** associated with this annotation must have its **AVAnnotHandlerGetInfoProc** and **AVAnnotHandlerDeleteInfoProc** callbacks defined.

Header File

PDExpt.h

Related Callbacks

None

Related Methods

PDRegisterAnnotHandler

Members

size	Size of the data structure. Must be set to **sizeof(PDAnnotHandlerRec)**.
userData	Pointer to a block of user-supplied data.

PDAnnotInfo

PDAnnotInfoRec

```
typedef struct _t_PDAnnotInfoRec {
ASSize_t size;
ASUns32 nOperationFlags;
unsigned char* cAuthor;
unsigned char* cContents;
unsigned char* cDate;
ASFixed fxLayer; /* New in Acrobat 5.0 */
} PDAnnotInfoRec, *PDAnnotInfo;
```

Description

Information associated with an annotation.

Header File

PDExpt.h

Related Callbacks

PDAnnotHandlerDeleteAnnotInfoProc
PDAnnotHandlerGetAnnotInfoProc

Related Methods

PDRegisterAnnotHandler

Members

size	Size of the data structure. Must be set to **sizeof(PDAnnotInfoRec)**.
nOperationFlags	Operations allowed on this annotation. Operations permitted are: • **PDAnnotOperationSummarize**—OK to summarize annotations • **PDAnnotOperationFilter**—OK to filter annotations • **PDAnnotOperationManager**—OK to manage annotations • **PDAnnotIgnorePerms**—Allow modifying this annotation type in a write-protected document • **PDAnnotOperationAll**—All operations are allowed.
cAuthor	Author of this annotation. Must be in either PDFDocEncoding or Unicode (with the **0xFEFF** prefix).

cContents	Associated text for this annotation. Must be in either PDFDocEncoding or Unicode (with the **0xFEFF** prefix).
cDate	Modification date of this annotation. The date should be the standard date format as specified in Section 3.8.2, “Dates,” in the *PDF Reference*.
fxLayer	*(New in Acrobat 5.0)* The layer of this annotation.

PDCharSet

Description

Enumerated data type. Identifies the character set of a Type 1, multiple master Type 1, or TrueType font.

Header File

PDExpT.h

Related Methods

PDFontGetCharSet

Members

PDStandardRomanCharSet	The font uses Adobe Standard encoding. This is determined by the “Uses Adobe Standard Encoding” bit in the font descriptor.
PDUnknownCharSet	The font does not use Adobe Standard Encoding.
PDAdobeExpertCharSet	Currently unused.

PDChromaticity

```
typedef struct _t_PDChromaticity {
ASFixed x;
ASFixed y;
} PDChromaticity;
```

Description

Data structure containing a monitor's chromaticity, for use in displaying device-independent color.

x and **y** are the two values needed to specify the chromaticity.

Header File

PDExpT.h

Related Types

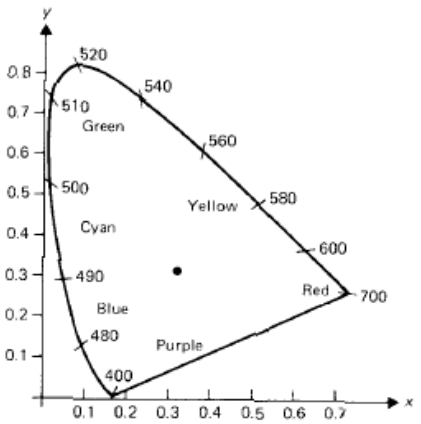
PDColorCalP

Related Methods

PDPrefGetColorCal
PDPrefSetColorCal

Members

x	The x-axis component of the monitor's chromaticity. See figure. Must be >= **0** and < **1**. **x** + **y** must be <= 1.
y	The y-axis component of the monitor's chromaticity. See figure. Must be > **0** and <= **1**. **x** + **y** must be <= 1.



PDColorCal

PDColorCalP

```
typedef struct _t_PDColorCal {
PDChromaticity whiteChrom;
PDChromaticity redChrom;
PDChromaticity greenChrom;
PDChromaticity blueChrom;
ASFixed redGamma;
ASFixed greenGamma;
ASFixed blueGamma;
} PDColorCal, *PDColorCalP;
```

Description

Data structure used to represent the characteristics of an output device; needed for device-independent color.

Header File

PDExpT.h

Related Methods

PDPrefGetColorCal
PDPrefSetColorCal

PDColorSpace

Description

Enumerated data type. Specifies the color space in which a color value is specified (for example, RGB or grayscale).

Header File

PDExpT.h

Related Types

PDColorValue

Related Methods

PDImageSelGetDeviceAttr

Members

PDDeviceGray	Grayscale. Requires 1 **value** entry to specify the color.
PDDeviceRGB	Red–Green–Blue color specification. Requires 3 **value** entries to specify the color.
PDDeviceCMYK	Cyan–Magenta–Yellow–Black color specification. Requires 4 **value** entries to specify the color.

PDColorValue

PDColorValueRec

```
typedef struct _t_PDColorValueRec {
PDColorSpace space;
ASFixed value[4];
} PDColorValueRec, *PDColorValue;
```

Description

Data structure representing a color. The number of elements needed in the **value** field depends on the color space type (specified in the **space** field). See **PDColorSpace** for more information.

See also **AVPrefsType**.

Header File

PDExpT.h

Related Methods

AVAppBeginFullScreen
AVPageViewGetColor
AVPageViewSetColor
PDAnnotGetColor
PDAnnotSetColor
PDStyleGetColor

PDCryptBatchHandler

PDCryptBatchHandlerRec

```
typedef struct _t_PDCryptBatchHandler *PDCryptBatchHandler;
typedef struct _t_PDCryptBatchHandler {
    ASSize_t size; /* size = sizeof(PDCryptBatchHandlerRec) */
    PDCryptBatchShowDialogProc BatchShowDialog;
    PDCryptBatchParamDescProc BatchParamDesc;
    PDCryptBatchNewAuthDataProc BatchNewAuthData;
    PDCryptBatchAuthorizeProc BatchAuthorize;
    PDCryptBatchFreeAuthDataProc BatchFreeAuthData;
    PDCryptBatchUpdateSecurityDataProc
                BatchUpdateSecurityData;
    PDCryptBatchPreSequenceProc BatchPreSequence;
    PDCryptBatchPostSequenceProc BatchPostSequence;
} PDCryptBatchHandlerRec;
```

Description

Callbacks used to open secured files and to modify security settings while batch is processing a list of files. These callbacks are not called while opening files through the UI. In addition, the regular **PDCryptHandler** functions are not called during batch operations.

Header File

PDExpt.h

Related Callbacks

None

Related Methods

PDRegisterCryptHandler
PDRegisterCryptHandlerEx

PDCryptHandler

PDCryptHandlerRec

```
typedef struct _t_PDCryptHandler {
ASSize_t size;
PDCryptAuthorizeProc Authorize;
PDCryptNewAuthDataProc NewAuthData;
PDCryptGetAuthDataProc GetAuthData;
PDCryptNewSecurityDataProc NewSecurityData;
PDCryptValidateSecurityDataProc ValidateSecurityData;
PDCryptUpdateSecurityDataProc UpdateSecurityData;
PDCryptNewCryptDataProc NewCryptData;
PDCryptFillEncryptDictProc FillEncryptDict;
PDCryptGetSecurityInfoProc GetSecurityInfo;
/* New in Acrobat 3.0 */
PDCryptFreeSecurityDataProc FreeSecurityData;
PDCryptFreeAuthDataProc FreeAuthData;
PDCryptFreeCryptDataProc FreeCryptData;
/* New callbacks for Acrobat 4.05 and later. */
PDCryptNewCryptDataExProc NewCryptDataEx;
/* New callbacks for Acrobat 5.0 and later. */
PDCryptAuthorizeExProc AuthorizeEx;
PDCryptGetAuthDataExProc GetAuthDataEx;
PDCryptDisplaySecurityDataProc DisplaySecurityData;
PDCryptReservedProc GetReservedData;
PDCryptBatchHandler CryptBatchHandler;
} PDCryptHandlerRec, *PDCryptHandler;
```

Description

Data structure containing callbacks that implement a security handler. The callbacks implement the security handler functions. For example, get authorization data such as a password from the user, set permissions, read and write security-related data in a PDF file, and so on.

Header File

PDExpt.h

Related Methods

PDRegisterCryptHandler
PDRegisterCryptHandlerEx

Members

size	Size of the data structure. Must be set to **sizeof(PDCryptHandlerRec)**.

PDDocCopyParams

PDDocCopyParamsRec

```
typedef struct _t_PDDocCopyParams{
ASSize_t size;
ASPathName newPath;
ASFileSys fileSys;
ProgressMonitor progMon;
void* progMonData;
CancelProc cancelProc;
void* cancelProcData;
ASBool saveChanges;
} PDDocCopyParamsRec, *PDDocCopyParams;
```

Description

Structure used by **PDDocCopyToFile** to specify file copy information.

Header File

PDExpt.h

Related Callbacks

None

Related Methods

PDDocCopyToFile

Members

size	Size of the data structure. Must be set to **sizeof(***PDDocCopyParamsRec)*.
newPath	Pathname to copy to, specified in whatever format is correct for **fileSys**.
fileSys	Pointer to an **ASFileSysRec** containing the file system that does the copy.
progMon	A progress monitor. May be **NULL**.
progMonData	Pointer to user-supplied data to pass to **progMon** each time it is called Must be **NULL** if **progMon** is **NULL**.
cancelProc	A cancel procedure. May be **NULL**.

cancelProcData	Pointer to user-specified data to pass to **cancelProc** each time it is called. Must be **NULL** if **cancelProc** is **NULL**.
saveChanges	If the document is dirty, should changes be saved? If the document is dirty and the product is Acrobat, save all in-memory changes to the new copy. Otherwise, just copy the on-disk bytes. Ignored in Reader.

PDDocFlags

Description

Enumerated data type. Specifies various file status attributes.

Header File

PDExpT.h

Related Methods

PDDocClearFlags
PDDocGetFlags
PDDocSetFlags

Flag		Description
PDDocNeedsSave	get/set	Document has been modified and needs to be saved.
PDDocRequiresFullSave	set only	Document cannot be saved incrementally; when it is saved using **PDDocSave**, the **PDSaveFull** flag must be specified (see **PDSaveFlags**).
PDDocIsModified	get only	Document has been modified slightly (such as bookmarks or text annotations have been opened or closed), but not in a way that warrants saving.
PDDocDeleteOnClose	get/set	Document is based on a temporary file that must be deleted when the document is closed or saved.
PDDocWasRepaired	get only	Document was repaired when it was opened.
PDDocNewMajorVersion	get only	Document's major version is newer than current.
PDDocNewMinorVersion	get only	Document's minor version is newer than current.
PDDocOldVersion	get only	Document's version is older than current.
PDDocSuppressErrors	get/set	Don't display errors.
PDDocIsEmbedded	get/set	Document is embedded in a compound document (OLE, OpenDoc).

Flag		Description
PDDocIsLinearized	get only	Document is linearized for page-served remote (network) access.
PDDocIsOptimized	set only	Document is optimized. If this flag is cleared, the Batch Optimizer plug-in and the Adobe PDF Library do not save the file optimized. You can, therefore, linearize a PDF file without optimizing it. Optimizing without linearizing is *not* allowed, however.

PDDocInsertPagesParams

PDDocInsertPagesParamsRec

```
typedef struct _t_PDDocInsertPagesParams {
ASSize_t size;
PDDoc targetDoc;
ASInt32 insertAfterThisPage;
PDDoc srcDoc;
ASInt32 srcFromPage;
ASInt32 srcToPage;
ASUns16 insertFlags;
ASInt32 error;
} PDDocInsertPagesParamsRec, *PDDocInsertPagesParams;
```

Description

Structure used to pass information to **PDDocWillInsertPagesEx** and **PDDocDidInsertPagesEx** notifications.

Header File

PDExpt.h

Related Callbacks

None

Related Methods

PDDocInsertPages

Members

size	Size of the data structure. Must be set to **sizeof(PDDocInsertPagesParamsRec)**.
targetDoc	The document into which pages are inserted. This document must have at least one page.
insertAfterThisPage	The page number in **targetDoc** after which pages from **srcDoc** are inserted. The first page is 0. If **PDBeforeFirstPage** (see **PDExpT.h**) is used, the pages are inserted before the first page in **targetDoc**. Use **PDLastPage** to insert pages after the last page in **targetDoc**.
srcDoc	The document containing the pages that are inserted into **targetDoc**.

srcFromPage	The page number of the first page in **srcDoc** to insert into **targetDoc**. The first page is 0.
srcToPage	The page number of the last page in **srcDoc** to insert into **targetDoc**.
insertFlags	Flags that determine what additional information is copied from **srcDoc** into **targetDoc**. Must be an OR of the following (see **PDExpT.h**): **PDInsertAll** — Inserts the entire document **srcDoc** into the document **targetDoc**. This operation not only inserts the pages themselves, but also merges other document data from **srcDoc** into **targetDoc**. In particular, the following happens: 1. The bookmark tree of **srcDoc** is merged into the bookmark tree of **targetDoc** by copying it as a new first-level sub-tree of **targetDoc**'s bookmark tree root, of which it becomes the last child. If **targetDoc** has no bookmark tree, it acquires one identical to the bookmark tree from **srcDoc**. 2. Named destinations from **srcDoc** (of PDF 1.1 and later) are copied into **targetDoc**. If there are named destinations in **srcDoc** with the same name as some named destination in **targetDoc**, the ones in **targetDoc** retain their names and the copied named destinations are given new names based on the old ones with distinguishing digits added. Actions and bookmarks referring to the old names are made to refer to the new names after being copied into **targetDoc**. 3. Document logical structure from **srcDoc** is copied into **targetDoc**. The top-level children of the structure tree root of **srcDoc** are copied as new top-level children of the structure tree root of **targetDoc**; a structure tree root is created in **targetDoc** if there was none before. The role maps of the two structure trees are merged, with name conflicts resolved in favor of the role mappings present in **targetDoc**. Attribute objects are not copied, nor is class map information from **srcDoc** merged into that for **targetDoc**. If **PDInsertAll** flag is *not* set, pages copied from **srcDoc** into **targetDoc** will have their structure back-pointer information stripped off. **PDInsertBookmarks** — Inserts bookmarks as well as pages. **PDInsertThreads** — Inserts threads as well as pages.
error	Error code, which is only valid for the **PDDocDidInsertPagesEx** notification.

PDDocOpenParams

PDDocOpenParamsRec

```
typedef struct _t_PDDocOpenParams{
ASSize_t size;
ASFile file;
ASPathName fileName;
ASFileSys fileSys;
PDAuthProcEx authProcEx;
void* authProcClientData;
ASBool doRepair;
PDPerms restrictPerms;
} PDDocOpenParamsRec, *PDDocOpenParams;
```

Description

Structure used by **PDDocOpenWithParams** to specify file open information. The parameters are very similar to those in **PDDocOpenEx** and **PDDocOpenFromASFileEx**.

Header File

PDExpt.h

Related Callbacks

None

Related Methods

PDDocOpenWithParams

Members

size	Size of the data structure. Must be set to **sizeof(***PDDocOpenParamsRec)*.
file	Pathname to the file, specified in whatever format is correct for **fileSys**.
fileName	Pathname to the file, specified in whatever format is correct for **fileSys**.
fileSys	Pointer to an **ASFileSysRec** containing the file system in which the file resides.

authProcEx	Authorization callback, called only if the file is encrypted. This callback should obtain whatever information is needed to determine whether or not the user is authorized to open the file, then call **PDDocAuthorize** (which returns the permissions that the authentication data enables). If the file is encrypted and **authProcEx** is **NULL** or returns **false**, **pdErrPassword** is raised. The Acrobat viewer's built-in authorization procedure requires the user to enter a password, and allows the user to try three times before giving up.
authProcClientData	Pointer to user-specified data to pass to **authProcEx** each time it is called.
doRepair	If **true**, attempt to repair the file if it is damaged; if **false**, do not attempt to repair the file if it is damaged.
restrictPerms	The permissions to remove from the document.

PDDocPreSaveInfo

```
typedef struct _t_PDDocPreSaveInfo {
ASSize_t size;
CosObjSetCallbackFlagProc callbackProc;
} PDDocPreSaveInfoRec, *PDDocPreSaveInfo;
```

Description

Structure used to flag Cos objects you wish to access while a **PDDoc** is being saved.

Header File

PDExpt.h

Related Callbacks

CosObjSetCallbackFlagProc

Related Methods

PDDocOpenWithParams

Members

size	Size of the data structure. Must be set to **sizeof(PDDocPreSaveInfo)**.
callbackProc	**CosObjSetCallbackFlagProc** callback to set flags in Cos objects to provide access to them during the save.

PDDocReadAhead Flags

Description

Flags describing what type of data to read “ahead.”

Header File

PDExpT.h

Related Methods

PDDocReadAhead

Members

kPDDocReadAheadAcroForms	Allows the AcroForm plug-in to request that all the AcroForm data be read “ahead,” before the viewer needs it. This flag is ignored if the PDF file does not contain a Forms hint table. See Section F.3.5 in the *PDF Reference* for information about the Forms hint table.
kPDDocReadAheadTemplates	Requests that the PDF file’s Forms Template data be read “ahead,” before the viewer needs it. There is currently no Template hint table defined, so this flag simply causes the rest of the file to be read.
kPDDocReadAheadPageLabels	Requests that the PDF file’s page label data be read “ahead,” before the viewer needs it. There is currently no page label hint table defined, so this flag simply causes the rest of the file to be read.
kPDDocReadAheadStructure	Requests that the PDF file’s logical structure data be read “ahead,” before the viewer needs it. There is currently no logical structure hint table defined, so this flag simply causes the rest of the file to be read.

PDDocSaveParams

PDDocSaveParamsRec

```
typedef struct _t_PDDocSaveParams {
ASSize_t size;
PDSaveFlags saveFlags;
ASPathName newPath;
ASFileSys fileSys;
ProgressMonitor mon;
void* monClientData;
CancelProc cancelProc;
void* cancelProcClientData;
/* Added in Acrobat 4.0 */
PDDocPreSaveProc preSaveProc;
void* preSaveProcClientData;
CosObjOffsetProc offsetProc;
void* offsetProcClientData;
ASInt16 major;
ASInt16 minor;
} PDDocSaveParamsRec, *PDDocSaveParams;
```

Description

Parameters used when saving a file with **PDDocSaveWithParams** and returned by the **PDDocWillSaveEx** notification. Most of these parameters are the same as the parameters for **PDDocSave**.

Header File

PDExpT.h

Related Methods

PDDocSaveWithParams

Members

size	Size of the data structure. Must be set to **sizeof(PDDocSaveParamsRec)**
saveFlags	Must be one of the **PDSaveFlags** values.

newPath	The path to which the file is saved. A path must be specified when either **PDSaveFull** or **PDSaveCopy** are used for **saveFlags**. If **PDSaveIncremental** is specified in **saveFlags**, then **newPath** should be **NULL**. If **PDSaveFull** is specified and **newPath** is the same as the file's original path, the new file is saved to a file system determined temporary path, then the old file is deleted and the new file is renamed to **newPath**.
fileSys	File system. If **NULL**, uses the **fileSys** of the document's current backing file. **Implementation Restriction:** Files can only be saved to the same file system, thus **fileSys** must be **NULL** or an error is raised.
mon	Progress monitor. Use **AVAppGetDocProgressMonitor** to obtain the default. May be **NULL**.
monClientData	Pointer to user-supplied data to pass to **mon** each time it is called. Must be **NULL** if **mon** is **NULL**.
cancelProc	A cancel procedure. Use **AVAppGetCancelProc** to obtain the current cancel procedure. May be **NULL**.
cancelProcClientData	Pointer to user-specified data to pass to **cancelProc** each time it is called. Must be **NULL** if **cancelProc** is **NULL**.
preSaveProc	Callback to flag Cos objects you wish to access while the **PDDoc** is being saved.
preSaveProcClientData	Pointer to user-specified data to pass to **preSaveProc** each time it is called.
offsetProc	Callback to get information about interesting Cos objects while the **PDDoc** is being saved.
offsetProcClientData	Pointer to user-specified data to pass to **offsetProc** each time it is called.
major	Major PDF version number of the document. If **major** equals 0, both **major** and **minor** are ignored. Make sure that the document conforms to the version number you are setting.
minor	Minor PDF version number of the document.

PDEColorSpaceStruct

```
typedef union {
PDEGrayCalFlt* calGray;
PDERGBCalFlt* calRGB;
PDELabCalFlt* lab;
PDEICCBasedColorData* icc;
PDEIndexedColorData* indexed;
PDEPatternColorSpace patternbase;
PDESeparationColorData* sep;
PDEDeviceNColorData* devn;
} PDEColorSpaceStruct;
```

Description

A color space structure for **PDEColorSpaceCreate**. See Section 4.5 in the *PDF Reference* for information on color spaces.

Header File

PEExpt.h

Related Callbacks

None

Related Methods

PDEColorSpaceCreate

PDEColorSpec

PDEColorSpecP

```
typedef struct _t_PDEColorSpec {
PDEColorSpace space;
PDEColorValue value;
} PDEColorSpec, *PDEColorSpecP;
```

Description

Structure describing a color specification.

Header File

PEExpT.h

Related Methods

Numerous

Members

space	The specified **PDEColorSpace**.
value	The color value.

PDEColorValue

PDEColorValueP

```
typedef struct _t_PDEColorValue {
ASFixed color[7];
PDEObject colorObj2;
PDEObject colorObj;
} PDEColorValue, *PDEColorValueP;
```

Description

Structure describing a color value.

Header File

PEExpT.h

Related Methods

Numerous

Members

color	Color value components. For instance, a Gray color space has 1 component, an RGB color space has 3 components, a CMYK has 4 components, and so on.
colorObj2	For a **DeviceN** color space.
colorObj	For color spaces whose color values do not have numeric values, such as the Pattern and Separation color spaces.

PDEContentAttrs

PDEContentAttrsP

```
typedef struct _t_PDEContentAttrs {
ASUns32 flags;
ASFixed cacheDevice[8];
ASInt32 formType;
ASFixedRect bbox;
ASFixedMatrix matrix;
CosObj XUID;
} PDEContentAttrs, *PDEContentAttrsP;
```

Description

Structure describing attributes of a **PDEContent** object.

Header File

PEExpT.h

Related Methods

PDEContentGetAttrs
PDEContentToCosObj

Members

flags	**PDEContentFlags** flags.
cacheDevice	If **flags** has **kPDESetCacheDevice** set, the first 6 cache device values contain the operands for the **d1** (**setcachdevice**) page operator. If **flags** has **kPDESetCacheDevice** set, **cacheDevice** contains 2 charwidth values.
formType	Only used if **PDEContent** contains a Form **XObject**. Corresponds to **FormType** key in the **XObject** Form attributes dictionary.
bbox	Only used if **PDEContent** contains a Form. Bounding box of the **PDEContent** object. Corresponds to **BBox** key in the **XObject** Form attributes dictionary.
matrix	Only used if **PDEContent** contains a Form. Transformation matrix for the **PDEContent** object. Corresponds to **Matrix** key in the **XObject** Form attributes dictionary.

XUID	Only used if **PDEContent** contains a Form. The form's XUID, an ID that uniquely identifies the form. Corresponds to **XUID** key in the **XObject** Form attributes dictionary.

PDEContentFlags

```
typedef enum {
kPDESetCacheDevice = 0x0001,
kPDESetCharWidth = 0x0002,
kPDEFormMatrix = 0x0004
} PDEContentFlags;
```

Description

Bit field for **PDEContentAttrs**.

Header File

PEExpT.h

Related Methods

PDEContentGetAttrs
PDEContentToCosObj

Members

kPDESetCacheDevice	Indicates **cacheDevice** contains 6 cache device values.
kPDESetCharWidth	Indicates **cacheDevice** contains 2 charwidth values.
kPDEFormMatrix	Indicates **formMatrix** contains a valid matrix.

PDEContentGetResourceFlags

```
typedef enum {
kPDEGetFonts,
kPDEGetXObjects,
kPDEGetColorSpaces
} PDEContentGetResourceFlags;
```

Description

Bit field for **PDEContentAttrs**.

Header File

PEExpT.h

Related Methods

PDEContentGetResources

Members

kPDEGetFonts	Obtain font resources.
kPDEGetXObjects	Obtain **Xobject** resources.
kPDEGetColorSpaces	Obtain color space resources.

PDEContentToCosObjFlags

```
typedef enum {
kPDEContentToPage = 0x0001,
kPDEContentToForm = 0x0002,
kPDEContentToCharProc = 0x0004,
kPDEContentRev1Compat = 0x0008,
kPDEContentDoNotResolveForms = 0x0010,
kPDEContentDoNotResolveType3 = 0x0020,
kPDEContentEmitDefaultRGBAndGray = 0x0040
} PDEContentToCosObjFlags;
```

Description

Bit field for the **PDEContentToCosObj** method, indicating the type of object to create and how it is created.

Header File

PEExpT.h

Related Methods

PDEContentToCosObj

Members

kPDEContentToPage	Create page contents.
kPDEContentToForm	Create a form.
kPDEContentToCharProc	Create charprocs.
kPDEContentRev1Compat	Currently unused.
kPDEContentDoNotResolveForms	Currently unused.
kPDEContentDoNotResolveType3	Currently unused.
kPDEContentEmitDefaultRGBAndGray	Emit calibrated RGB and gray information using the PDF 1.0 compatible mechanism. In this case, generate **rg** and **k** page operators and place **DefaultGray** and **DefaultRGB** color space arrays in the Resources dictionary, as described in Section 4.5.7 in the *PDF Reference*.

PDEDash

PDEDashP

```
typedef struct _t_PDEDash {
ASFixed dashPhase;
ASInt32 dashLen;
ASFixed dashes[11];
} PDEDash, *PDEDashP;
```

Description

Structure describing a dash specification, as described in Table 4.8 in the *PDF Reference.* See Section 4.3.2 for more information on line dash patterns.

Header File

PEExpT.h

Related Methods

Numerous

Members

dashPhase	Dash phase. Phase is a number that specifies a distance in user space into the dash pattern at which to begin marking the path.
dashLen	Number of entries in the dash array, an element of the Border array.
dashes	Dash array, which specifies distances in user space for the length of dashes and gaps.

PDEDeviceNColorData

```
typedef struct _t_PDEDeviceNColorData {
ASSize_t size;
ASAtom* names;
ASUns32 nNames;
PDEColorSpace alt;
CosObj tintTransform;
} PDEDeviceNColorData;
```

Description

Structure describing a **DeviceRGB** or **DeviceCMYK** color space.

Header File

PEExpt.h

Related Types

PDEColorSpaceStruct

Related Callbacks

None

Related Methods

PDEColorSpaceCreate

Members

size	Size of the data structure. Must be set to **sizeof(PDEDeviceNColorData)**.
names	Names of colorants.
nNames	Number of colorants.
alt	Alternative color space.
tintTransform	The **tintTransform** dictionary or function. See Section 4.5.5 in the *PDF Reference* for more information.

PDEElementCopyFlags

```
typedef enum {
kPDEElementCopyForClip = 0x0001,
kPDEElementCopyClipping = 0x0002
} PDEElementCopyFlags;
```

Description

Bit field for **PDEElementCopy**.

Header File

PEExpT.h

Related Methods

PDEElementCopy

Members

kPDEElementCopyForClip	Copied element does not need **gstate** or clip.
kPDEElementCopyClipping	Acquire the clip path and put it in the copied object.

PDEEnumElementsFlags

```
typedef enum {
kPDEContentIgnoreMarkedContent = 0x0001
} PDEEnumElementsFlags;
```

Description

Bit field for **PDEEnumElements** method.

Header File

PEExpT.h

Related Methods

PDEEnumElements

Members

kPDEContentIgnoreMarkedContent	Indicates whether Marked Content is ignored in the enumeration. This may be useful when generating elements purely for display purposes.

PDEFilterArray

PDEFilterArrayP

```
typedef struct _t_PDEFilterArray {
ASInt32 numFilters;
PDEFilterSpec spec[1];
} PDEFilterArray, *PDEFilterArrayP;
```

Description

Filter information for streams.

Although the **PDEFilterSpec** is declared as a one-member array in the header file, more members can be added by dynamically allocating the **PDEFilterArray** with space for as many filters as you would like to add.

In practice, there is seldom need for more than two filters.

Header File

PEExpT.h

Related Methods

PDEContentToCosObj
PDEImageCreate

Example

```
pdeFilterArray = (PDEFilterArrayP) malloc(offsetof(PDEFilterArray, spec)
+ (sizeof(PDEFilterSpec) *2));
```

Members

numFilters	Number of filters in the array.
spec	Variable length array of filter spec.

PDEFilterSpec

PDEFilterSpecP

```
typedef struct _t_PDEFilterSpec {
CosObj decodeParms;
CosObj encodeParms;
ASAtom name;
ASInt16 padding;
} PDEFilterSpec, *PDEFilterSpecP;
```

Description

Filter element in a filter array.

Header File

PEExpT.h

Related Methods

PDEContentToCosObj
PDEImageCreate

Example

```
CosObj dctDict = CosNewDict(theCosDoc,false, 3);
CosDictPut(dctDict, ASAtomFromString("Columns"),
CosNewInteger(NULL,false,width_of_image));

CosDictPut(dctDict, ASAtomFromString("Rows"), CosNewInteger(NULL, false,
hight_of_image));

CosDictPut(dctDict, ASAtomFromString("Colors"), CosNewInteger(NULL,
false,num_colors));
/* 3 for RGB 4 for CMYK */

pdeFilters->spec[i].encodeParms = dctDict;
```

Members

decodeParms	Parameters used by the decoding filters specified with the Filter key. Corresponds to the **DecodeParms** key in the stream dictionary. Must be set to **NULL** if **PDEFilterSpec** is specified but no encode or decode parameters are specified. This can be done by passing **CosNewNull** for the unused encode and/or decode params. Required decode params for **DCTDecode** are **Columns**, **Rows**, and **Colors**. The parameters should be passed in a **CosDict**.
encodeParms	Parameters used when encoding the stream. Required for **DCTDecode** filter; optional for other filters. Must be set to **NULL** if **PDEFilterSpec** is specified but no encode or decode parameters are specified. This can be done by passing **CosNewNull** for the unused encode and/or decode params.
name	Filter name. Supported filters are: **ASCIIHexDecode**, **ASCII85Decode**, **LZWDecode**, **DCTDecode**, **CCITTFaxDecode**, **RunLengthDecode**, and **FlateDecode**.
padding	Reserved — used to align to 32 bits.

PDEFontAttrs

PDEFontAttrsP

```
typedef struct _t_PDEFontAttrs {
ASAtom name;
ASAtom type;
ASAtom charSet;
ASAtom encoding;
ASUns32 flags;
ASFixedRect fontBBox;
ASInt16 missingWidth;
ASInt16 stemV;
ASInt16 stemH;
ASInt16 capHeight;
ASInt16 xHeight;
ASInt16 ascent;
ASInt16 descent;
ASInt16 leading;
ASInt16 maxWidth;
ASInt16 avgWidth;
ASInt16 italicAngle;
/* New in Acrobat 4.0 */
ASAtom cidFontType;
ASInt16 wMode;
ASAtom psName;
ASAtom lang;
ASAtom registry;
ASAtom ordering;
ASInt32 supplement;
} PDEFontAttrs, *PDEFontAttrsP;
```

Description

Attributes of a **PDEFont** and of a **PDSysFont**. The fields after encoding are almost the same as a **PDFontMetricsP** structure. This structure is also referenced in **PDEFontCreateParams**.

Header File

PEExpT.h

Related Methods

PDEFontCreate
PDEFontCreateWithParams

PDEFontGetAttrs
PDFindSysFont
PDFindSysFontEx
PDSysFontGetAttrs
PDSysFontGetEncoding
PDSysFontAcquirePlatformData

Members

name	An **ASAtom** for font name, as in “Times-Roman.” Corresponds to the **BaseFont** key in the font dictionary of a PDF file (see Section 5.6.3 in the *PDF Reference*).
type	An **ASAtom** for font type, corresponding to the **Subtype** key in a a font dictionary. May be “Type1,” “TrueType,” “MMType1,” or “Type0.”
charSet	An **ASAtom** for “Roman” or **ASAtomNull**. If “Roman,” the characters must be a subset of the Adobe Standard Roman Character Set.
encoding	An **ASAtom** for font encoding. May be **MacRomanEncoding**, **WinAnsiEncoding**, or **ASAtomNull**. In the case of **ASAtomNull**, call **PDSysFontGetEncoding** to get more information about the encoding.
flags	Desired font flags, one or more of **Font Flags**.
fontBBox	Font bounding box in 1000 EM units.
missingWidth	Width of missing character (.notdef).
stemV	Vertical stem width.
stemH	Horizontal stem width.
capHeight	Capital height.
xHeight	X height.
ascent	Maximum ascender height.
descent	Maximum descender depth.
leading	Additional leading between lines.
maxWidth	Maximum character width.
avgWidth	Average character width.
italicAngle	Italic angle in degrees, if any.

cidFontType	**ASAtom** representing the CID font type: CIDFontType0 or CIDFontType2.
wMode	Writing mode. Must be one of: • **0** for horizontal writing • **1** for vertical writing
psName	**ASAtom** representing the PostScript name of a TrueType font.
lang	**ASAtom** representing the ISO 639 language code. These are available from http://www.iso.ch.
registry	**ASAtom** representing the CIDFont's Registry information, as in "Adobe-Japan".
ordering	**ASAtom** representing the CIDFont's Ordering information, for example, "1".
supplement	The **SystemSupplement** field from the CIDFont.

PDEFontCreateFlags

```
typedef enum {
kPDEFontCreateEmbedded = 0x0001,
kPDEFontWillSubset = 0x0002,
kPDEFontDoNotEmbed = 0x0004,
kPDEFontEncodeByGID = 0x0008
/* New for 5.0*/
kPDEFontDeferWidths = 0x0010,
kPDEFontCreateSubset = kPDEFontWillSubset,
kPDEFontCreateGIDOverride = 0x0020,
kPDEFontCreateToUnicode = 0x0040
} PDEFontCreateFlags;
```

Description

Flags for **PDEFontCreateFromSysFont**.

Header File

PEExpT.h

Related Methods

PDEFontCreateFromSysFont
PDEFontCreateFromSysFontAndEncoding
PDEFontCreateFromSysFontWithParams

kPDEFontWillSubset

Subset the font. If you want to subset a font, set both the **kPDEFontCreateEmbedded** and **kPDEFontWillSubset** flags.

Members

kPDEFontCreateEmbedded	Create an embedded font. By itself, this will *not* subset the font.
kPDEFontWillSubset	Subset the font. If you want to subset a font, set both the **kPDEFontCreateEmbedded** and **kPDEFontWillSubset** flags. You must call **PDEFontSubsetNow** to actually subset the font. Both embedding and sub-setting a font creates a CFF font.
kPDEFontDoNotEmbed	Do not embed the font. You cannot set both this and the **kPDEFontWillSubset** flags. Nor can you set **kPDEFontCreateEmbedded.**

kPDEFontEncodeByGID	Create a CIDFont with identity (GID) encoding.
kPDEFontDeferWidths	*(New for Acrobat 5.0)* Wait to get widths until later (affects Type0 fonts only).
kPDEFontCreateSubset	*(New for Acrobat 5.0)* Create a subset.
kPDEFontCreateGIDOverride	*(New for Acrobat 5.0)* PDFLib will convert **cp** to **gid** with identity embedded.
kPDEFontCreateToUnicode	*(New for Acrobat 5.0)* Create **ToUnicode** CMap.

PDEFontCreateNeedFlags

```
typedef enum {
kPDEFontCreateNeedWidths = 0x00010000,
kPDEFontCreateNeedToUnicode = 0x00020000,
kPDEFontCreateNeedEmbed = 0x00040000} PDEFontCreateNeedFlags;
```

Description

Flags for **PDEFontGetCreateNeedFlags**.

Header File

PEExpT.h

Related Methods

None

Members

kPDEFontCreateNeedWidths	Need to create widths.
kPDEFontCreateNeedToUnicode	Need to create **ToUnicode** stream.
kPDEFontCreateNeedEmbed	Need to embed it.

PDEFontCreateFromSysFontParams

PDEFontCreateFromSysFontParamsRec

```
typedef struct _t_PDEFontCreateFromSysFontParams {
ASUns32 structSize;
ASUns32 flags;
ASAtom  snapshotName;
ASFixed *mmDesignVec;
long ctCodePage;
ASAtom encoding;
} PDEFontCreateFromSysFontParamsRec,
*PDEFontCreateFromSysFontParams;
```

Description

Data structure used with PDEFont creation.

Header File

PEExpt.h

Related Callbacks

None

Related Methods

PDEFontCreateFromSysFontWithParams

Members

structSize	Size of the data structure. Must be set to **sizeof(PDEFontCreateFromSysFontParamsRec)**.
flags	A bit mask of the **PDEFontCreateFlags**.
snapshotName	The name of a multiple master snapshot. See *PDF Reference* for more information on snapshots.
mmDesignVec	Pointer to multiple master font design vector.
ctCodePage	Used to select a specific code page supported by the font. When a non-zero code page is supplied, embedding must be turned on and the **kPDEFontEncodeByGID** flag set.
encoding	Used to specify which encoding to use with a CID font. Pass **ASAtomNull** to use the platform default.

PDEFontCreateParams

PDEFontCreateParamsP

```
typedef struct _t_PDEFontCreateParams {
PDEFontAttrsP attrsP;
ASUns32 attrsSize;
ASInt32 firstChar;
ASInt32 lastChar;
ASInt16* widthsP;
char** encoding;
ASAtom encodingBaseName;
ASStm fontStm;
ASInt32 len1;
ASInt32 len2;
ASInt32 len3;
ASBool hasDW;
ASInt32 dw;
CosObj w;
ASBool hasDW2;
ASInt32 dw2[2];
CosObj w2;
ASInt32 toUnicodeLen;
ASStm toUnicodeStm;
ASStm cidToGidMapStm;
char* panoseNo;
CosObj fd;
ASStm cidSetStm;
ASUns32 flags;
/* New in Acrobat 4.0 */
ASFixed* mmDesignVec;
} PDEFontCreateParamsRec, *PDEFontCreateParamsP;
```

Description

Parameters used for **PDEFontCreateWithParams** to describe a font.

Header File

PEExpt.h

Related Types

PDEColorSpaceStruct

Related Callbacks

None

Related Methods

PDEFontCreateWithParams

Members

attrsP	Pointer to a **PDEFontAttrs** for the font attributes.
attrsSize	Size of the data structure. Must be set to **sizeof(PDEFontAttrs)**.
firstChar	First character index for the widths array, **widthsP**.
lastChar	Last character index for the widths array, **widthsP**.
widthsP	Pointer to widths array.
encoding	An array of 256 pointers to glyph names specifying the custom encoding. If any pointer is **NULL**, no encoding information is written for that entry.
encodingBaseName	An **ASAtom** representing the encoding base name if the encoding is a custom encoding. If **encoding** is **NULL**, **encodingBaseName** is used as the value of the encoding and must be one of “WinAnsiEncoding”, “MacRomanEncoding”, or “MacExpertEncoding”. If no encoding value is desired, use **ASAtomNull**.
fontStm	Stream with font information.
len1	Length in bytes of the ASCII portion of the Type 1 font file after it has been decoded. For other font formats, such as TrueType or CFF, only **len1** is used, and it is the size of the font.
len2	Length in bytes of the encrypted portion of the Type 1 font file after it has been decoded.
len3	Length in bytes of the portion of the Type 1 font file that contains the 512 zeros, plus the **cleartomark** operator, plus any following data.
hasDW	If **true**, the **dw** and **w** fields are used; if **false**, they are not used.
dw	*(Optional)* Default width for glyphs in a CIDFont. See Section 5.6.3 in the *PDF Reference* for more information.

w	A Cos array of a set of lists that define the widths for the glyphs in the CIDFont. Each list can specify individual widths for consecutive CIDs, or one width for a range of CIDs. See Section 5.6.3 on character widths in CIDFonts in the *PDF Reference* for information on the format of this array.
hasDW2	If **true**, the **dw2** and **w2** fields are used; if **false**, they are not used.
dw2	*(Optional; applies only to CIDFonts that are used for vertical writing)* The default metric for writing mode 1. This entry is an array of two numbers: the **y** component of the position vector and the **y** component of the displacement vector for writing mode 1. The **x** component of the position vector is always half the width of the character. The **x** component of the displacement vector is always 0. The default value is [880 -1000]. For information on writing mode 1, see Section 5.6.3 on vertical writing in the *PDF Reference.*
w2	*(Optional; applies only to CIDFonts that are used for vertical writing)* A Cos array defining the metrics for vertical writing. Its format is similar to the format of the array in **w**. It defines the **x** and **y** components of the position vector, and the y component of the displacement vector. The **x** component of the displacement vector is always 0. See Section 5.6.3 on character widths in CIDFonts in the *PDF Reference* for information on the format of this array.
toUnicodeLen	*(Optional)* Length of **toUnicodeStm**.
toUnicodeStm	*(Optional)* A stream containing a CMap that defines the mapping from character codes to Unicode values. This entry is recommended for fonts that do not use one of the predefined CMaps. If present, this allows strings in the encoding to convert to Unicode values for export to other applications or plug-ins. For more information, see Section 5.6 on Type 0 fonts in the *PDF Reference.*
cidToGidMapStm	A stream contain the mapping from CID to glyphindex (“GID”). The glyphindex for a particular CID value c is a 2-byte value stored in bytes 2*c and 2*c+1; the first byte is the high-order byte.
panoseNo	A 12-byte string containing the Family Class ID, Family SubClass ID, and 10 bytes for the Panose classification number for the font. For additional details on the Panose number, see *Japanese TrueType Font Property Selection Guidelines* by the TrueType Conference Technical Committee.

fd	A Cos dictionary identifying a subset of characters in a CIDFont. The values are dictionaries with entries that override the values in the **FontDescriptor** dictionary for the subset of characters. See Section 5.6 in the *PDF Reference* for more information.
cidSetStm	A stream identifying which CIDs are present in the CIDFont file. It is required if the CIDFont file is embedded and only contains a subset of the glyphs in the character collection defined by the CIDSystemInfo. If this entry is missing, then it is assumed that the CIDFont file contains all the glyphs for the character collection. The stream's length should be rounded up to the nearest multiple of 8. The bits should be stored in bytes with the high-order bit first. Each bit corresponds to a CID. The first bit of the first byte corresponds to CID 0, the next bit corresponds to CID 1, and so on. If the subset contains a CID, the bit for that CID should be set. For compactness, the stream may use one of the compression filters to encode the data. For more information, see Section 5.6 in the *PDF Reference.*
flags	One of the **PDEFontCreateFlags** describing how to embed and subset the font.
mmDesignVec	Pointer to multiple master font design vector.

PDEFontInfoRec

PDEFontInfoP

```
typedef struct _t_PDEFontInfo {
ASAtom name;
ASAtom type;
ASAtom charSet;
ASAtom encoding;
} PDEFontInfoRec, *PDEFontInfoP;
```

Description

PDEFont information.

Header File

PSFExpT.h

Related Methods

PDSysFontGetInfo

Members

name	An **ASAtom** for font name, as in “Times-Roman.”
type	An **ASAtom** for font type, “Type 1,” “TrueType,” and so on.
charSet	An **ASAtom** for “Roman” or **ASAtomNull**. If “Roman,” the characters must be a subset of the Adobe Standard Roman Character Set.
encoding	An **ASAtom** for font encoding, as in **WinAnsiEncoding**.

PDEGraphicState

PDEGraphicStateP

```
typedef struct _t_PDEGraphicState {
ASUns32 wasSetFlags;
PDEColorSpec fillColorSpec;
PDEColorSpec strokeColorSpec;
PDEDash dash;
ASFixed lineWidth;
ASFixed miterLimit;
ASFixed flatness;
ASInt32 lineCap;
ASInt32 lineJoin;
ASAtom renderIntent;
PDEExtGState extGState;
} PDEGraphicState, *PDEGraphicStateP;
```

Description

Attributes of a **PDEElement** or a **PDEText** sub-element.

Header File

PEExpT.h

Related Methods

PDEDefaultGState
PDETextAdd

Members

wasSetFlags	**PDEGraphicStateWasSetFlags** indicating if an attribute has been set. NOTE: Support for these flags is not complete. For compatibility, you should set them, but do not depend on reading their values back. The intended use is with XObject Forms to indicate whether the value is inherited or explicitly set.
fillColorSpec	Fill color specification. The default value is **DeviceGray**, **fixedZero**.
strokeColorSpec	Stroke color specification. The default value is **DeviceGray**, **fixedZero**.
dash	Dash specification. The default value is **[0, 0]**.

lineWidth	Line width, corresponding to the **w** (**setlinewidth**) operator. The default value is **fixedOne**.
miterLimit	Miter limit, corresponding to the **M** (**setmiterlimit**) operator. The default value is **fixedTen**.
flatness	Line flatness, corresponding to the **i** (**setflat**) operator. The default value is **fixedZero**.
lineCap	Line cap style, corresponding to the **J** (**setlinecap**) operator. The default value is **0**.
lineJoin	Line join style, corresponding to the **j** (**setlinejoin**) operator. The default value is **0**.
renderIntent	A color rendering intent, corresponding to the **Intent** key in the image dictionary. The default value is **0**.
extGState	An extended graphics, corresponding to the **gs** operator. The default value is **CosObj**, **NULL**.

PDEGraphicStateWasSetFlags

```
typedef enum {
kPDEFillCSpaceWasSet = 0x0001,
kPDEFillCValueWasSet = 0x0002,
kPDEStrokeCSpaceWasSet = 0x0004,
kPDEStrokeCValueWasSet = 0x0008,
kPDEDashWasSet = 0x0010,
kPDELineWidthWasSet = 0x0020,
kPDEMiterLimitWasSet = 0x0040,
kPDEFlatnessWasSet = 0x0080,
kPDELineCapWasSet = 0x0100,
kPDELineJoinWasSet = 0x0200,
kPDERenderIntentWasSet = 0x0400,
kPDEExtGStateWasSet = 0x0800
} PDEGraphicStateWasSetFlags;
```

Description

Structure describing the graphics state that was set.

Header File

PEExpT.h

Related Methods

PDEDefaultGState
PDETextAdd

Members

kPDEFillCSpaceWasSet	A fill color space was set, corresponding to the **cs** (**setcolorspace**) operator.
kPDEFillCValueWasSet	A color fill value was set, corresponding to the **sc** (**setcolor**) operator.
kPDEStrokeCSpaceWasSet	A color space stroke value was set, corresponding to the **CS** (**setcolorspace**) operator.
kPDEStrokeCValueWasSet	A color stroke value was set, corresponding to the **SC** (**setcolor**) operator.
kPDEDashWasSet	A dash specification was set, corresponding to the **d** (**setdash**) operator.
kPDELineWidthWasSet	The line width was set, corresponding to the **w** (**setlinewidth**) operator.

kPDEMiterLimitWasSet	The miter limit was set, corresponding to the **M** (**setmiterlimit**) operator.
kPDEFlatnessWasSet	Line flatness was set, corresponding to the **i** (**setflat**) operator.
kPDELineCapWasSet	Line cap style was set, corresponding to the **J** (**setlinecap**) operator.
kPDELineJoinWasSet	Line join style was set, corresponding to the **j** (**setlinejoin**) operator.
kPDERenderIntentWasSet	A color rendering intent was set, corresponding to the **Intent** key in the image dictionary.
kPDEExtGStateWasSet	An extended graphics state was set, corresponding to the **gs** operator.

PDEGrayCalFlt

```
typedef struct _t_PDEGrayCalFlt {
    PDEWhitePointFlt whitePoint;
    PDEBlackPointFlt blackPoint;
    float gamma;
} PDEGrayCalFlt;
```

Description

Structure describing a **CalGray** color space.

Default **PDEGrayCalFlt**: **PDEGrayCalFlt calGray = {{0, 0, 0}, {0, 0, 0}, 1};**

Header File

PEExpt.h

Related Types

PDEColorSpaceStruct

Related Callbacks

None

Related Methods

PDEColorSpaceCreate

PDEICCBasedColorData

```
typedef struct _t_PDEICCBasedColorData {
ASSize_t size;
ASStm iccstream;
ASUns32 nComps;
PDEColorSpace altCs;
} PDEICCBasedColorData;
```

Description

Structure describing an **ICCBased** color space.

Header File

PEExpt.h

Related Types

PDEColorSpaceStruct

Related Callbacks

None

Related Methods

PDEColorSpaceCreate

Members

size	Size of the data structure. Must be set to **sizeof(PDEICCBasedColorData)**.
iccstream	Stream containing ICC Profile.
nComps	Number of color components (1, 3, or 4).
altCs	*(Optional)* Alternate color space.

PDEImageAttrFlags

```
typedef enum {
kPDEImageExternal = 0x0001,
kPDEImageIsMask = 0x0002,
kPDEImageInterpolate = 0x0004,
kPDEImageHaveDecode = 0x0008,
kPDEImageIsIndexed = 0x0010,
/* Added in Acrobat 4.0 */
kPDEImageMaskedByPosition = 0x0020,
kPDEImageMaskedByColor = 0x0040
} PDEImageAttrFlags;
```

Description

Flags for **PDEImageAttrs**. See Section 4.8.4 in the *PDF Reference* for more information on image attributes.

Header File

PEExpT.h

Related Methods

PDEImageCreate
PDEImageGetAttrs
PDEImageGetData

Members

kPDEImageExternal	Indicates image is an **XObject**.
kPDEImageIsMask	Indicates image is an image mask.
kPDEImageInterpolate	Indicates interpolate is **true**.
kPDEImageHaveDecode	Indicates there is a decode array.
kPDEImageIsIndexed	Indicates image uses an indexed color space.
kPDEImageMaskedByPosition	Indicates image has a **Mask** key containing an image mask stream.
kPDEImageMaskedByColor	Indicates image has a **Mask** key containing an array of color values.

PDEImageAttrs

PDEImageAttrsP

```
typedef struct _t_PDEImageAttrs {
ASUns32 flags;
ASInt32 width;
ASInt32 height;
ASInt32 bitsPerComponent;
ASFixed decode[8];
/* New in Acrobat 4.0 */
ASAtom intent;
} PDEImageAttrs, *PDEImageAttrsP;
```

Description

Attributes of a **PDEImage**.

Header File

PEExpT.h

Related Methods

PDEImageCreate
PDEImageGetAttrs
PDEImageGetData

Members

flags	**PDEImageAttrFlags** indicating image attributes.
width	Width of the image, corresponding to the **Width** key in the image dictionary.
height	Height of the image, corresponding to the **Height** key in the image dictionary.
bitsPerComponent	Number of bits used to represent each color component in the image, corresponding to the **BitsPerComponent** key in the image dictionary.
decode	An array of numbers specifying the mapping from sample values in the image to values appropriate for the current color space. These values correspond to the **Decode** key in the image dictionary.
intent	Color rendering intent, corresponding to the **Intent** key in the image dictionary.

PDEImageDataFlags

```
typedef enum {
kPDEImageEncodedData = 0x0001
} PDEImageDataFlags;
```

Description

Flags for **PDEImageGetData**, **PDEImageGetDataStm**, **PDEImageSetData**, and **PDEImageSetDataStm**.

Header File

PEExpT.h

Related Methods

PDEImageGetData
PDEImageGetDataStm
PDEImageSetData
PDEImageSetDataStm

Members

kPDEImageEncodedData	Indicates filter is active; data is encoded.

PDEIndexedColorData

```
typedef struct _t_PDEIndexedColorData {
ASSize_t size;
PDEColorSpace baseCs;
ASUns16 hival;
char* lookup;
ASUns32 lookupLen;
} PDEIndexedColorData;
```

Description

Structure describing an indexed color space.

Header File

PEExpt.h

Related Types

PDEColorSpaceStruct

Related Callbacks

None

Related Methods

PDEColorSpaceCreate

Members

size	Size of the data structure. Must be set to **sizeof(PDEIndexedColorData)**.
baseCs	Base color space.
hival	Highest color value.
lookup	Indexed color lookup data.
lookupLen	Number of bytes in lookup data.

PDELabCalFlt

```
typedef struct _t_PDELabCalFlt {
    PDEWhitePointFlt whitePoint;
    PDEBlackPointFlt blackPoint;
    PDEColorRangeFlt rangeA, rangeB;
} PDELabCalFlt;
```

Description

Structure describing a **L*a*b*** color space.

Default **PDELabCalFlt**: **`PDELabCalFlt lab = {{0, 0, 0}, {0, 0, 0}, {-100, 100}, {-100, 100}};`**

Header File

PEExpt.h

Related Types

PDEColorSpaceStruct

Related Callbacks

None

Related Methods

PDEColorSpaceCreate

PDEPathElementType

```
typedef enum {
kPDEMoveTo,
kPDELineTo,
kPDECurveTo,
kPDECurveToV,
kPDECurveToY,
kPDERect,
kPDEClosePath,
kPDEPathLastType
} PDEPathElementType;
```

Description

Enumerated data type for path segment operators in **PDEPath** elements.

Header File

PEExpT.h

Related Methods

PDEPathAddSegment
PDEPathCreate
PDEPathSetData

Members

kPDEMoveTo	Designates **m** (**moveto**) operator, which moves the current point.
kPDELineTo	Designates **l** (**lineto**) operator, which appends a straight line segment from the current point.
kPDECurveTo	Designates **c** (**curveto**) operator, which appends a Bézier curve to the path.
kPDECurveToV	Designates **v** (**curveto**) operator, which appends a Bézier curve to the current path when the first control point coincides with initial point on the curve.
kPDECurveToY	Designates **y** (**curveto**) operator, which appends a Bézier curve to the current path when the second control point coincides with final point on the curve.
kPDERect	Designates **re** operator, which adds a rectangle to the current path.

kPDEClosePath	Designates **h** (**closepath**) operator, which closes the current sub-path.

PDEPathOpFlags

```
typedef enum {
kPDEInvisible = 0x00,
kPDEStroke = 0x01,
kPDEFill = 0x02,
kPDEEoFill = 0x04
} PDEPathOpFlags;
```

Description

Flags for paint operators in a **PDEPath**.

Header File

PEExpT.h

Related Methods

PDEPathGetPaintOp
PDEPathSetPaintOp

Members

kPDEInvisible	Path is neither stroked nor filled, so it is invisible.
kPDEStroke	Stroke the path, as with the **S** (**stroke**) operator.
kPDEFill	Fills the path, using the nonzero winding number rule to determine the region to fill, as with the **f** (**fill**) operator.
kPDEEoFill	Fills the path, using the even–odd rule to determine the region to fill, as with the **f*** (**eofill**) operator.

PDEPatternColorSpace

```
typedef PDEColorSpace PDEPatternColorSpace;
```

Description

PDEColorSpace describing a **Pattern** color space.

Header File

PEExpt.h

Related Types

PDEColorSpaceStruct

Related Callbacks

None

Related Methods

PDEColorSpaceCreate

PDEPSAttrs

PDEPSAttrsP

```
typedef struct _t_PDEPSAttrs {
ASUns32 flags;
} PDEPSAttrs, *PDEPSAttrsP;
```

Description

Attributes of a **PDEPS** object.

Header File

PEExpt.h

Related Methods

PDEPSCreate
PDEPSGetAttrs

Members

flags	**kPDEPSInline**

PDERGBCalFlt

```
typedef struct _t_PDERGBCalFlt {
    PDEWhitePointFlt whitePoint;
    PDEBlackPointFlt blackPoint;
    float redGamma;
    float greenGamma;
    float blueGamma;
    float matrix[9];
} PDERGBCalFlt;
```

Description

Structure describing a **CalRGB** color space. Same as **AGMRGBCalFlt** (Only available as part of the PDF Library SDK).

Default **PDERGBCalFlt**:: **PDERGBCalFlt calRGB = {{0, 0, 0}, {0, 0, 0}, 1, 1, 1, {1, 0, 0, 0, 1, 0, 0, 0, 1}};**

Header File

PEExpt.h

Related Types

AGMRGBCalFlt (Only available as part of the PDF Library SDK)
PDEColorSpaceStruct

Related Callbacks

None

Related Methods

PDEColorSpaceCreate

PDESeparationColorData

```
typedef struct _t_PDESeparationColorData {
ASSize_t size;
ASAtom name;
PDEColorSpace alt;
CosObj tintTransform;
} PDESeparationColorData;
```

Description

Structure describing a separation color space.

Header File

PEExpt.h

Related Types

PDEColorSpaceStruct

Related Callbacks

None

Related Methods

PDEColorSpaceCreate

Members

size	Size of the data structure. Must be set to **sizeof(PDESeparationColorData)**.
name	Name of separation or colorant.
alt	Alternative colorspace.
tintTransform	The tintTransform dictionary or function. See Section 4.5.5 in the *PDF Reference*.

PDESoftMaskCreateFlags

```
typedef enum {
kPDESoftMaskTypeLuminosity  = 0x0001,
kPDESoftMaskTypeAlpha       = 0x0002
    } PDESoftMaskCreateFlags;
```

Description

Flags for use with **PDESoftMaskCreate**.

Header File

PDEExpT.h

Related Methods

PDESoftMaskCreate

Members

kPDESoftMaskTypeLuminosity	Specifies how the mask is to be computed.
kPDESoftMaskTypeAlpha	Specifies how the mask is to be computed.

PDETextFlags

```
typedef enum {
kPDETextRun = 0x0001,
kPDETextChar = 0x0002,
kPDETextPageSpace = 0x0004,
kPDETextGetBounds = 0x0008
} PDETextFlags;
```

Description

Bit field used in **PDEText** methods.

Header File

PEExpT.h

Related Methods

PDETextAdd
PDETextGetFont
PDETextGetText

Members

kPDETextRun	Text run.
kPDETextChar	Character (text run with only one character).
kPDETextPageSpace	Obtain the advance width in page space.
kPDETextGetBounds	Fill in the left and right bounds of the text run's bounding box.

PDETextRenderMode

```
typedef enum {
kPDETextFill,
kPDETextStroke,
kPDETextFillAndStroke,
kPDETextInvisible
} PDETextRenderMode;
```

Description

Flags indicating text rendering mode set by the **Tr** operator.

Header File

PEExpT.h

Related Methods

PDETextCreate

Members

kPDETextFill	Fill text.
kPDETextStroke	Stroke text.
kPDETextFillAndStroke	Fill and stroke text.
kPDETextInvisible	Text with no fill and no stroke (invisible).

PDETextState

PDETextStateP

```
typedef struct _t_PDETextState {
ASUns32 wasSetFlags;
ASFixed charSpacing;
ASFixed wordSpacing;
ASInt32 renderMode;
ASFixed fontSize; /*new in PDFLib 5.0. Default=1 */
ASFixed hscale;/*new in PDFLib 5.0. Default=100 (==100%)*/
ASFixed textRise; /*new in PDFLib 5.0*/
} PDETextState, *PDETextStateP;
```

Description

Attributes of a **PDEText** element.

Header File

PEExpT.h

Related Methods

PDETextAdd
PDETextGetTextState
PDETextRunSetTextState

Members

wasSetFlags	**PDETextStateWasSetFlags** indicating if an attribute has been set. NOTE: Support for these flags is not complete. For compatibility, you should set them, but do not depend on reading their values back. The intended use is with XObject Forms to indicate whether the value is inherited or explicitly set. NOTE: **PDFEdit** ignores the **wasSetFlags** flag, so you must initialize the **PDETextState** fields.
charSpacing	Character spacing was set, corresponding to the **Tc** operator.
wordSpacing	Word spacing, corresponding to the **Tw** operator.
renderMode	Text rendering mode, corresponding to the **Tr** operator.
fontSize	Default is **1**.

hscale	`Default=100 (==100%)`
textRise	Specifies the distance, in text space units that are not scaled, to move the baseline up or down from its default location. See Section 5.2.6 in the *PDF Reference*.

PDETextStateWasSetFlags

```
typedef enum {
kPDECharSpacingWasSet = 0x0001,
kPDEWordSpacingWasSet = 0x0002,
kPDERenderModeWasSet = 0x0004
} PDETextStateWasSetFlags;
```

Description

Structure describing the text state that was set.

Header File

PEExpT.h

Related Methods

PDETextAdd
PDETextGetTextState
PDETextRunSetTextState

Members

kPDECharSpacingWasSet	Character spacing was set, corresponding to the **Tc** operator.
kPDEWordSpacingWasSet	Word spacing was set, corresponding to the **Tw** operator.
kPDERenderModeWasSet	Text rendering mode was set, corresponding to the **Tr** operator.

PDEType

```
typedef enum {
kPDEContent,
kPDEText,
kPDEPath,
kPDEImage,
kPDEForm,
kPDEPS,
kPDEXObject,
kPDEClip,
kPDEFont,
kPDEColorSpace,
kPDEExtGState,
kPDEPlace,
kPDEContainer,
kPDSysFont,
kPDEPattern,
kPDEDeviceNColors, /* Added in Acrobat 4.0 */
kPDEShading, /* Added in Acrobat 4.0 */
kPDEGroup, /* Added in Acrobat 4.0 */
kPDEUnknown, /* Added in Acrobat 4.0 */
kPDEBeginContainer, /* Added in Acrobat 5.0 */
kPDEEndContainer, /* Added in Acrobat 5.0 */
kPDEBeginGroup, /* Added in Acrobat 5.0 */
kPDEEndGroup, /* Added in Acrobat 5.0 */
kPDEXGroup, /* Added in Acrobat 5.0 */
kPDESoftMask, /* Added in Acrobat 5.0 */
kPDSysEncoding, /* Added in Acrobat 5.0 */
kPDEDoc, /* Added in Acrobat 5.0 */
kPDEPage, /* Added in Acrobat 5.0 */
kPDELastType /* Added in Acrobat 4.0 */
} PDEType;
```

Description

Types of **PDEObject**, which is the superclass for **PDEContent**, **PDEElement**, **PDEClip**, and so on.

Header File

PEExpT.h

Related Methods

PDEObjectGetType

Members

kPDEContent	**PDEContent** object.
kPDEText	**PDEText** object.
kPDEPath	**PDEPath** object.
kPDEImage	**PDEImage** object.
kPDEForm	**PDEForm** object.
kPDEXObject	**PDEXObject** object.
kPDEClip	**PDEClip** object.
kPDEFont	**PDEFont** object.
kPDEColorSpace	**PDEColorSpace** object.
kPDEExtGState	**PDEExtGState** object.
kPDEPlace	**PDEPlace** object.
kPDEContainer	**PDEContainer** object.
kPDSysFont	**PDSysFont** object.
kPDEPattern	**PDEPattern** object.
kPDEDeviceNColors	**PDEDeviceNColors** object.
kPDEShading	**PDEShading** object.
kPDEGroup	**PDEGroup** object.
kPDEUnknown	**PDEUnknown** object.
kPDEBeginContainer	*(New in 5.0)* **PDEBeginContainer** object.
kPDEEndContainer	*(New in 5.0)* **PDEEndContainer** object.
kPDEBeginGroup	*(New in 5.0)* **PDEBeginGroup** object.
kPDEEndGroup	*(New in 5.0)* **PDEEndGroup** object.
kPDEXGroup	*(New in 5.0)* **PDEXObject** object.
kPDESoftMask	*(New in 5.0)* **PDESoftMask** object.
kPDSysEncoding	*(New in 5.0)* **PDSysEncoding** object.
kPDEDoc	*(New in 5.0)* Reserved for future use.

kPDEPage	*(New in 5.0)* Reserved for future use.

PDEXGroupCreateFlags

Description

Enumerated data type used to specify the type of transparency group to create.

Header File

PEExpT.h

Related Callbacks

None

Related Methods

PDESoftMaskCreate

Members

kPDEXGroupTypeTransparency	Creates a transparency XGroup object.

PDFileSpecHandler

```
typedef struct _t_PDFileSpecHandler {
ASSize_t size;
PDFileSpecNewFromASPathProc NewFromASPath;
PDFileSpecAcquireASPathProc AcquireASPath;
/* New for Acrobat 3.0 */
PDLaunchActionProc LaunchAction;
/* Added in Acrobat 4.0 */
ASFileSys fileSys;
} PDFileSpecHandlerRec, *PDFileSpecHandler;
```

Description

Data structure that implements a file specification handler. It contains callbacks that implement the filespec handler's functions (converting from a file specification to an **ASPathName**, creating a new file specification from an **ASPathName**, and launching the specified file).

Header File

PDExpT.h

Related Methods

PDRegisterFileSpecHandlerByName

Members

size	Size of the data structure. Must be set to **sizeof(PDFileSpecHandlerRec).**
fileSys	The file system that is used to read data for this file specification handler.

PDFontEncoding

Description

Enumerated data type. Specifies a font's encoding.

Header File

PDExpT.h

Related Methods

PDFontGetEncodingIndex

Members

PDBuiltInEncoding	The encoding specified internally in the font. In the case of a Type 1 or MMType 1 font, this is specified by the **Encoding** value in the font's fontdict. In the case of TrueType fonts, this is the encoding specified by the default one-byte CMap for the platform.
PDMacRomanEncoding	**MacRomanEncoding**, as defined in Appendix D in the *PDF Reference*.
PDMacExpertEncoding	**MacExpertEncoding**, as defined in Appendix D in the *PDF Reference*.
PDWinAnsiEncoding	**WinAnsiEncoding**, as defined in Appendix D in the *PDF Reference*.
PDStdEncoding	**StandardEncoding**, as defined in Appendix D in the *PDF Reference*.
PDFDocEncoding	**PDFDocEncoding**, as defined in Appendix D in the *PDF Reference*. This will never be returned for a font; it is used internally.

PDFontMetrics

PDFontMetricsP

```
typedef struct _t_PDFontMetrics {
ASUns32 flags;
ASFixedRect fontBBox;
ASInt16 missingWidth;
ASInt16 stemV;
ASInt16 stemH;
ASInt16 capHeight;
ASInt16 xHeight;
ASInt16 ascent;
ASInt16 descent;
ASInt16 leading;
ASInt16 maxWidth;
ASInt16 avgWidth;
ASInt16 italicAngle;
/* Added in Acrobat 4.0 */
PDFontStyles style;
ASInt16 baseLineAdj;
} PDFontMetrics, *PDFontMetricsP;
```

Description

Data structure containing information about a font's metrics. See Section 5.5.1 in the *PDF Reference* for more information about font metrics.You also can find information about Adobe Font Metrics (AFM) on the http://partners.adobe.com/asn web site.

Header File

PDExpT.h

Related Methods

PDFontGetMetrics
PDFontSetMetrics

Members

flags	Must be an OR of the **Font Flags** values. All unused flags must be off.
fontBBox	Font bounding box in 1000 EM units. (An EM is a typographic unit of measurement equal to the size of a font. In a 12-point font, an EM is 12 points.)

missingWidth	The width of missing char (**.notdef**).
stemV	The vertical stem width.
stemH	The horizontal stem width.
capHeight	The capital height.
xHeight	The X height.
ascent	The maximum ascender height.
descent	The maximum descender depth.
leading	The additional leading between lines.
maxWidth	The maximum character width.
avgWidth	The average character width.
italicAngle	The italic angle in degrees, if any.
style	Panose and sFamily class values.
baseLineAdj	Baseline adjustment, which is a vertical adjustment for font baseline difference and writing mode 1 (vertical). This should only be used for CIDFontType 2 fonts with font substitution. See Section 5.6.3 in the *PDF Reference* for more information.

PDFontStyles

```
typedef struct _t_PDFontStyles {
ASUns8 sFamilyClassID;
ASUns8 sFamilySubclassID;
ASUns8 bFamilyType;
ASUns8 bSerifStyle;
ASUns8 bWeight;
ASUns8 bProportion;
} PDFontStyles;
```

Description

Data structure containing Panose and sFamily class values for a font. Used in the **PDFontMetrics** structure. See Section 5.7.2 in the *PDF Reference* for more information. For additional details on the Panose number, see *Japanese TrueType Font Property Selection Guidelines* by the TrueType Conference Technical Committee.

Header File

PDExpT.h

Related Methods

PDFontGetMetrics
PDFontSetMetrics

Members

sFamilyClassID	Number that identifies the font family and determines the meaning of the remaining Panose digits. Possible families are Latin, Kanji, Hebrew, and so forth.
sFamilySubclassID	Number to identify the kind of family: text, decorative, handwritten, symbols, and so on.
bFamilyType	Number to identify the family type: text, decorative, handwritten, symbols, and so on.
bSerifStyle	Number that specifies the font's serif style, such as cove, obtuse cove, square, bone, and so forth.
bWeight	Number that specifies the font's weight, such as very light, heavy, black, and so on.
bProportion	Number that specifies the font's proportions, such as modern, expanded, condensed, mono-spaced, and so on.

PDGraphicEnumMonitor

```
typedef struct _t_PDGraphicEnumMonitor {
ASSize_t size;
PDGraphicEnumTextProc EnumText;
PDGraphicEnumPathProc EnumPath;
PDGraphicEnumImageProc EnumImage;
PDGraphicEnumXObjectRefProc EnumXObjectRef;
PDGraphicEnumSaveProc EnumSave;
PDGraphicEnumRestoreProc EnumRestore;
PDGraphicEnumCharWidthProc EnumCharWidth;
PDGraphicEnumCacheDeviceProc EnumCacheDevice;
/* New for Acrobat 3.0 */
PDGraphicEnumXObjectRefMatrixProc EnumXObjectRefMatrix;
} PDGraphicEnumMonitorRec, *PDGraphicEnumMonitor;
```

Description

An array of callbacks to pass to **PDCharProcEnum**, **PDFormEnumPaintProc** or **PDPageEnumContents**. One of the callbacks is called for every renderable object in the page contents. Pass **NULL** for a callback to *not* enumerate that type of object. Each array element must be either **NULL** or a valid callback. Enumeration of the page contents halts if the callback returns **false**.

NOTE: **PDPageEnumContents** is provided only for backwards compatibility. It has not been updated beyond PDF Version 1.1 and may not work correctly for newly-created PDF 1.2 or later files. You should use the PDFEdit API to enumerate page contents.

NOTE: In versions at least through Acrobat 2.1, enumeration does not stop even if a method returns **false**.

Header File

PDExpT.h

Related Methods

PDCharProcEnum
PDFormEnumPaintProc
PDPageEnumContents

Members

size	Size of the data structure. Must be set to **sizeof(PDGraphicEnumMonitorRec)**.

PDGraphicState

PDGraphicStateP

```
typedef struct _t_PDGraphicState {
ASFixedMatrix ctm;
ASFixed fillColor[4];
ASFixed strokeColor[4];
ASAtom fillCSpace;
ASAtom strokeCSpace;
ASFixed flatness;
ASInt32 lineCap;
ASFixed dashPhase;
ASInt32 dashLen;
ASFixed dashes[10];
ASInt32 lineJoin;
ASFixed lineWidth;
ASFixed miterLimit;
} PDGraphicState, *PDGraphicStateP;
```

Description

Data structure containing information about the current graphics state.

Header File

PDExpT.h

Related Methods

PDGraphicGetState

PDImageAttrs

PDImageAttrsP

```
typedef struct _t_PDImageAttrs {
ASInt32 width;
ASInt32 height;
ASInt32 bitsPerComponent;
ASBool imageMask;
ASBool interpolate;
ASBool haveDecode;
ASFixed decode[8];
ASAtom colorSpaceName;
ASBool isIndexed;
ASInt32 hiVal;
CosObj colorSpace;
ASInt32 dataLen;
/* Added in Acrobat 4.0 */
ASInt32 comps;
} PDImageAttrs, *PDImageAttrsP;
```

Description

Data structure containing information about the attributes of an image. See Section 4.8, “Images,” in the *PDF Reference* for more information.

Header File

PDExpT.h

Related Methods

PDImageGetAttrs
PDInlineImageGetAttrs

Members

width	*(Required)* Width of the source image in samples.
height	*(Required)* Height of the source image in samples.
bitsPerComponent	(Required) The number of bits used to represent each color component.
imageMask	*(Optional)* **true** if the image should be treated as a mask; **false** otherwise.

interpolate	*(Optional) true* if interpolation is performed; *false* otherwise. Interpolation attempts to smooth transitions between sample values.
haveDecode	**true** if **decode** is used; **false** otherwise.
decode	*(Optional)* An array of numbers specifying the mapping from sample values in the image to values appropriate for the current color space.
colorSpaceName	ASAtom representing the color space name.
isIndexed	**true** if the color space is indexed; **false** otherwise.
hiVal	*(Optional)* Used if **isIndexed** is **true**. Colors are specified by integers in the range 0 to **hival**.
colorSpace	*(Required for images, not allowed for image masks)* Cos object of the color space used for the image samples.
dataLen	Length of sample data, in bytes.
comps	Number of components in **colorSpace**. For instance, **comps** is 3 for an RGB color space.

PDLayoutMode

```
typedef ASEnum8 PDLayoutMode;
enum {
    PDLayoutDontCare,
    PDLayoutSinglePage,
    PDLayoutOneColumn,
    PDLayoutTwoColumnLeft,
    PDLayoutTwoColumnRight
};
```

Description

Structure that defines the layout of a document. The layout can be set as the viewer's **avpPageViewLayoutMode** preference (set by **AVAppSetPreference**) or in a view of a document by the **pageViewLayoutMode** field in **AVDocViewDef** (set by **AVDocGetViewDef**).

Header File

PDExpT.h

Related Methods

AVDocGetViewDef
AVPageViewGetLayoutMode
AVPageViewSetLayoutMode

PDLayoutDontCare	*(Default)* Use the user preference when opening the file, as specified in the **avpPageViewLayoutMode** preference, set by **AVAppSetPreference**.
PDLayoutSinglePage	Use single-page mode, as in pre-Acrobat 3.0 viewers.
PDLayoutOneColumn	Use one-column continuous mode.
PDLayoutTwoColumnLeft	Use two-column continuous mode with first page on left.
PDLayoutTwoColumnRight	Use two-column continuous mode with first page on right.

PDLinkAnnotBorder

```
typedef struct _t_PDLinkAnnotBorder {
ASInt32 hCornerRadius;
ASInt32 vCornerRadius;
ASInt32 width;
ASInt32 dashArrayLen;
ASFixed dashArray[PDAnnotMaxDashes];
} PDLinkAnnotBorder;
```

Description

The border's dash pattern is specified by **dashArray** and **dashArrayLen**. This is a normal PostScript dash pattern (an array of on/off stroke lengths used cyclically) except that zero is always used as the offset ("phase") and the number of array entries is limited to **PDAnnotMaxDashes**. The number of valid **dashArray** entries is specified by **dashArrayLen**—a **dashArrayLen** of zero specifies a solid border.

Header File

PDExpT.h

Related Methods

PDLinkAnnotGetBorder
PDLinkAnnotSetBorder

PDOperation

Description

Enumerated data type. Specifies the type of changes that occurred for the **PDDocPrintingTiledPage** and **PDDocDidChangePages** notifications. Not all **Did** notifications have corresponding **Will** notifications. The exceptions are listed in the table.

Header File

PDExpT.h

Methods

PDDocDeletePages
PDDocInsertPages
PDDocMovePage
PDPageAddCosContents
PDPageAddCosResource
PDPageRemoveCosContents
PDPageRemoveCosResource
PDPageSetRotate
PDPageSetCropBox
PDPageSetMediaBox

Members

pdOpInsertPages	Page insertion.
pdOpDeletePages	Page deletion.
pdOpMovePages	Page rearrangement.
pdOpRotatePages	Page rotation.
pdOpCropPages	Page cropping.
pdOpAddResource	Only **PDDocDidChangePages** **exists**, not **PDDocWillChangePages**.
pdOpRemoveResource	Only **PDDocDidChangePages** **exists**, not **PDDocWillChangePages**.
pdOpAddContents	Only **PDDocDidChangePages** **exists**, not **PDDocWillChangePages**.
pdOpRemoveContents	Only **PDDocDidChangePages** **exists**, not **PDDocWillChangePages**.
pdOpSetMediaBox	Page media box modification.

PDPageDrawFlags

```
typedef ASUns32 PDPageDrawFlags;
enum {
kPDPageDoLazyErase,
kPDPageUseAnnotFaces,
kPDPageIsPrinting
};
```

Description

Bit flags indicating how a page is rendered.

Header File

PXExpT.h

Related Methods

PDPageDrawContentsPlaced (Only available with PDF Library SDK)

Flag	Description
kPDPageDoLazyErase	Erase the page while rendering only as needed.
kPDPageUseAnnotFaces	Draw annotation appearances.
kPDPageIsPrinting	The page is being printed.

PDPageMode

Description

Enumerated data type. Specifies whether or not thumbnail images or bookmarks are shown.

Header File

PDExpT.h

Related Methods

AVDocGetViewMode
AVDocSetViewMode
PDDocGetPageMode
PDDocSetPageMode

Value	Description
PDDontCare	Leaves view mode as is.
PDUseNone	Displays document, but neither thumbnails nor bookmarks.
PDUseThumbs	Displays document plus thumbnails.
PDUseBookmarks	Displays document plus bookmarks.
PDFullScreen	Displays document in full-screen viewing mode. This is equivalent to **AVAppBeginFullScreen**.

PDPageRange

```
typedef struct _t_PDTextSelectRange {
ASInt32 startPage;
ASInt32 endPage;
ASInt32 pageSpec;
} PDPageRange;
```

Description

Specifies a range of pages in a document. Page numbers begin with 0.

Header File

PDExpt.h

Related Types

PDPrintParams (Only available with PDF Library SDK)

Related Methods

None

Members

startPage	Starting page number.
endPage	Ending page number.
pageSpec	Pages in the range to print. Must be one of: **PDAllPages**, **PDEvenPagesOnly**, or **PDOddPagesOnly.** See **Page Specification**.

PDPageStmToken

PDPageStmTokenRec

```
typedef struct _t_PageStmToken {
ASSize_t size;
CosType type;
ASUns32 flags;
ASInt32 iVal;
char sVal[kPDPageStmStringMax];
ASSize_t sValLen;
} PDPageStmTokenRec, *PDPageStmToken;
```

Description

Data structure used by **PDPageStmGetToken**. It contains information about the current page contents token.

Header File

PDExpT.h

Related Methods

PDPageStmGetToken

Members

size	Size of the data structure. Must be set to **sizeof(PDPageStmTokenRec)**.
type	Token's type (**CosInteger**, **CosString**, **CosBoolean**, and so on). Must be one of the **Cos Object Types**.
flags	Additional information about token. Must be (see PDExpT.h): **kPDPageStmTokenHexString** — The token is a hexadecimal encoded string.
iVal	Token's value if the token is a Cos integer, fixed number, or name.
sVal	Token's value if the token is a Cos string.
sValLen	Length of **sVal**, in bytes.

PDPathEnumMonitor

PDPathEnumMonitorRec

```
typedef struct _t_PDPathEnumMonitor {
ASSize_t size;
PDPathMoveToProc MoveTo;
PDPathLineToProc LineTo;
PDPathCurveToProc CurveTo;
PDPathVCurveToProc VCurveTo;
PDPathYCurveToProc YCurveTo;
PDPathRectProc Rect;
PDPathClosePathProc ClosePath;
} PDPathEnumMonitorRec, *PDPathEnumMonitor;
```

Description

Data structure containing callbacks used by **PDPathEnum**. One callback is called for each path operator encountered; the callback to call depends on the operator.

Header File

PDExpT.h

Related Methods

PDPathEnum

Members

size	Size of the data structure. Must be set to **sizeof(PDPathEnumMonitorRec)**.

PDPathPaintOp

Description

Enumerated data type. Specifies the path painting operator used on a path.

Header File

PDExpT.h

Related Methods

PDPathGetPaintOp

Flag	Description
pdPathNoPaint	Path is not painted.
pdPathOpClose	Path contains a closepath operator.
pdPathStroke	Path contains a stroke operator.
pdPathFill	Path contains a fill operator.
pdPathEOFill	Path contains an eofill operator.
pdPathClip	Path contains a clip operator.
pdPathEOClip	Path contains an eoclip operator.

PDPermReqObj

```
typedef ASInt16 PDPermReqObj;
enum {
    PDPermReqObjDoc = 1,
    PDPermReqObjPage,
    PDPermReqObjLink,
    PDPermReqObjBookmark,
    PDPermReqObjThumbnail,
    PDPermReqObjAnnot,
    PDPermReqObjForm,
    PDPermReqObjSignature,
    PDPermReqObjLast
};
```

Description

Enumerated data type used to describe the target object of a permissions request.

Header File

PDExpT.h

Related Callbacks

PDCryptAuthorizeExProc
PDCryptGetAuthDataExProc

Related Methods

PDDocPermRequest

Members

PDPermReqObjDoc	Document object. Applicable operations: • **PDPermReqOprAll** • **PDPermReqOprModify** (Doc Info, open action, page label, modifying document) • **PDPermReqOprCopy** (Copy to clipboard) • **PDPermReqOprAccessible** • **PDPermReqOprSelect** (Selection only) • **PDPermReqOprOpen** • **PDPermReqOprSecure** • **PDPermReqOprPrintHigh** • **PDPermReqOprPrintLow** • **PDPermReqOprSaveAs** (Save As PDF) • **PDPermReqOprImport** (Non-PDF) • **PDPermReqOprExport** (Non-PDF & text extract API, Search & Catalog) • **PDPermReqOprAny**
PDPermReqObjPage	Page object. Applicable operations: • **PDPermReqOprAll** • **PDPermReqOprCreate** • **PDPermReqOprDelete** • **PDPermReqOprCopy** (duplicate page) • **PDPermReqOprRotate** • **PDPermReqOprCrop** • **PDPermReqOprInsert** • **PDPermReqOprReplace** • **PDPermReqOprReorder** • **PDPermReqOprAny**
PDPermReqObjLink	Link object (external file/URL link). Applicable operations: • **PDPermReqOprAll** • **PDPermReqOprCreate** • **PDPermReqOprDelete** • **PDPermReqOprModify** • **PDPermReqOprAny**
PDPermReqObjBookmark	Bookmark object. Applicable operations: • **PDPermReqOprAll** • **PDPermReqOprCreate** • **PDPermReqOprDelete** • **PDPermReqOprModify** • **PDPermReqOprAny**

PDPermReqObjThumbnail	Thumbnail object. Applicable operations: • **PDPermReqOprAll** • **PDPermReqOprCreate** • **PDPermReqOprDelete** • **PDPermReqOprAny**
PDPermReqObjAnnot	Annotation object. Applicable operations: • **PDPermReqOprAll** • **PDPermReqOprCreate** • **PDPermReqOprDelete** • **PDPermReqOprModify** • **PDPermReqOprSummarize** • **PDPermReqOprImport** • **PDPermReqOprExport** • **PDPermReqOprAny**
PDPermReqObjForm	Form object. Applicable operations: • **PDPermReqOprAll** • **PDPermReqOprCreate** • **PDPermReqOprDelete** • **PDPermReqOprModify** • **PDPermReqOprFillIn** • **PDPermReqOprImport** (Form data) • **PDPermReqOprExport** (Form data) • **PDPermReqOprAny**
PDPermReqObjSignature	Signature object. Applicable operations: • **PDPermReqOprAll** • **PDPermReqOprCreate** • **PDPermReqOprDelete** • **PDPermReqOprModify** • **PDPermReqOprFillIn** (sign) • **PDPermReqOprAny**
PDPermReqObjLast	Used for checking cache size.

PDPermReqOpr

```
typedef ASInt16 PDPermReqOpr;
```

Description

Enumerated data type used to describe the target operation of a permissions request.

Header File

PDExpT.h

Related Callbacks

PDCryptAuthorizeExProc
PDCryptGetAuthDataExProc

Related Methods

PDDocPermRequest

Members

PDPermReqOprAll = 1	Check all operations.
PDPermReqOprCreate	Generic.
PDPermReqOprDelete	Delete.
PDPermReqOprModify	Modify.
PDPermReqOprCopy	Copy
PDPermReqOprAccessible	For Accessibility use.
PDPermReqOprSelect	For document or page, selecting (not copying) text or graphics.
PDPermReqOprOpen	For document open.
PDPermReqOprSecure	For document—changing security settings.
PDPermReqOprPrintHigh	For document—regular printing.
PDPermReqOprPrintLow	For document—low quality printing.
PDPermReqOprFillIn	Form fill-in or to sign existing field.
PDPermReqOprRotate	Rotate.
PDPermReqOprCrop	Crop.
PDPermReqOprSummarize	For summarize notes.

PDPermReqOprInsert	Insert.
PDPermReqOprReplace	For page.
PDPermReqOprReorder	For page.
PDPermReqOprFullSave	For document.
PDPermReqOprImport	For notes and image.
PDPermReqOprExport	For notes. “ExportPS” should check print.
PDPermReqOprAny	Used for checking to see if any operation is allowed.
PDPermReqOprUnknownOpr	Used for error checking

PDPermReqStatus

```
typedef ASInt16 PDPermReqStatus;
enum {
    PDPermReqDenied = -1,
    PDPermReqGranted = 0,
    PDPermReqUnknownObject = 1,
    PDPermReqUnknownOperation = 2,
    PDPermReqOperationNA = 3
};
```

Description

An enumerated data type that provides the status of **PDDoc**-related permissions methods.

Header File

PDExpT.h

Related Callbacks

PDCryptAuthorizeExProc
PDCryptGetAuthDataExProc

Related Methods

PDDocPermRequest

Members

PDPermReqDenied = -1	Request was denied.
PDPermReqGranted = 0	Request was granted.
PDPermReqUnknownObject = 1	The object is unknown.
PDPermReqUnknownOperation = 2	The operation is unknown.
PDPermReqUnknownOperation = 2	The operation is not applicable for the specified object.

PDPerms

Description

Permissions that a user has on a file.

Header File

PDExpT.h

Related Methods

AVCryptGetPassword
PDDocAuthorize
PDDocGetPermissions

Members

pdPermOpen	The user is permitted to open and decrypt the document.
pdPermSecure	The user is permitted to change the document's security settings.
pdPermPrint	The user is permitted to print the document. Page Setup access is unaffected by this permission, since that affects Acrobat's preferences—not the document's.
pdPermEdit	The user is permitted to edit the document more than adding or modifying text notes (see also **pdPermEditNotes**).
pdPermCopy	The user is permitted to copy information from the document to the clipboard.
pdPermEditNotes	The user is permitted to add, modify, and delete text notes (see also **pdPermEdit**).
pdPermSaveAs	The user is permitted to perform a "Save As…" If both **pdPermEdit** and **pdPermEditNotes** are disallowed, "Save" will be disabled but "Save As…" is enabled. The "Save As…" menu item is not necessarily disabled even if the user is not permitted to perform a "Save As…".
pdPermOwner	The user is permitted to perform all operations, regardless of the permissions specified by the document. Unless this permission is set, the document's permissions will be reset to those in the document after a full save.
pdPermSettable	The OR of all operations that can be set by the user in the security dialog (**pdPermPrint** + **pdPermEdit** + **pdPermCopy** + **pdPermEditNotes**).
pdPermAll	The OR of all security flags.

pdPermUser	A convenience value, that is, (**pdPermAll** – **pdPermOpen** – **pdPermSecure**).

PDResourceEnumMonitor

PDResourceEnumMonitorRec

```
typedef struct _t_PDResourceEnumMonitor {
ASSize_t size;
PDResourceEnumFontProc EnumFont;
PDResourceEnumXObjectProc EnumXObject;
PDResourceEnumProcSetProc EnumProcSet;
PDResourceEnumColorSpaceProc EnumColorSpace;
} PDResourceEnumMonitorRec, *PDResourceEnumMonitor;
```

Description

Data structure containing callbacks used when enumerating the resources of a form with **PDFormEnumResources** or **PDPageEnumResources**.

NOTE: **PDPageEnumResources** is provided only for backwards compatibility. It has not been updated beyond PDF Version 1.1 and may not work correctly for newly-created PDF 1.2 or later files. You should use the PDFEdit API to enumerate page resources.

Header File

PDExpT.h

Related Methods

PDFormEnumResources

Members

size	Size of the data structure. Must be set to **sizeof(PDResourceEnumMonitorRec)**.

PDRotate

```
typedef ASEnum16 PDRotate;
enum {
    pdRotate0 = 0,
    pdRotate90 = 90,
    pdRotate180 = 180,
    pdRotate270 = 270
};
```

Description

Enumerated data type. Specifies page rotation, in degrees. Used for routines that set/get the value of a page's **Rotate** key.

Header File

PDExpT.h

Related Methods

PDPageGetRotate
PDPageSetRotate

PDSaveFlags

Description

Enumerated data type. Specifies options for saving a file.

Header File

PDExpT.h

Related Methods

PDDocSave

Members

PDSaveFull	Write the entire file to the filename specified by **newPath**. In addition to this flag, the **PDSaveCollectGarbage**, **PDSaveCopy**, and **PDSaveLinearized** may be specified. Plug-ins that use **PDSaveFull** are also encouraged to use **PDSaveCollectGarbage.**
PDSaveCollectGarbage	Remove unreferenced objects, often reducing file size. Plug-ins are encouraged to use this flag. This flag can only be specified if **PDSaveFull** is also used.
PDSaveCopy	Write a copy of the file into the file specified by **newPath**, but keep using the old file. This flag can only be specified if **PDSaveFull** is also used.
PDSaveLinearized	Write the file linearized for page-served remote (network) access. This flag can only be specified if **PDSaveFull** is also used. During linearization, all Cos objects in the PDF file can be (and usually are) renumbered and recached in memory. Any PD or Cos level objects stored prior to linearization are *invalidated* if **PDSaveLinearized** is set. If invalid objects are used as a parameter in any method, a **genErrBadParm** (bad parameter) exception is raised. Thus, if any objects have been acquired, they need to be released prior to saving a PDDoc linearized. Register for the **PDDocWillSave** and **PDDocDidSave** notifications if the plug-in has acquired any objects; release them after the **PDDocWillSave** notification and acquire them again after the **PDDocDidSave** notification.
PDSaveBinaryOK	It is OK to store binary data in the PDF file.

PDSysFontMatchFlags

```
typedef enum {
kPDSysFontMatchNameAndCharSet,
kPDSysFontMatchFontType,
kPDSysFontMatchWritingMode
} PDSysFontMatchFlags;
```

Description

Font matching flags for **PDFindSysFontForPDEFont** and **PDFindSysFont**.

Header File

PSFExpT.h

Related Methods

PDFindSysFont
PDFindSysFontForPDEFont

Members

kPDSysFontMatchNameAndCharSet	Match the font name and character set.
kPDSysFontMatchFontType	Match the font type.
kPDSysFontMatchWritingMode	Match the writing mode, that is, horizontal or vertical.

PDSysFontPlatData

PDSysFontPlatDataP

```
/* In Windows */
typedef struct _t_PDSysFontPlatData {
ASSize_t size;
LOGFONT* lf;
ASPathName fontPath;
ASPathName afmPath;
} PDSysFontPlatData, *PDSysFontPlatDataP;
/* In Mac OS */
typedef struct _t_PDSysFontPlatData {
ASSize_t size;
ASInt16 fontID;
ASInt16 fontStyle;
} PDSysFontPlatData, *PDSysFontPlatDataP;
/* In UNIX */
typedef struct _t_PDSysFontPlatData {
ASSize_t size;
ASPathName fontPath;v
ASPathName afmPath;
} PDSysFontPlatData, *PDSysFontPlatDataP;
```

Description

System font platform-dependent data.

Header File

PDSysFontExpT.h

Related Methods

PDSysFontAcquirePlatformData
PDSysFontReleasePlatformData

Members

size	Size of the data structure. Must be set to **sizeof(PDSysFontPlatData)**.
lf	*(Windows only)* Windows **LOGFONT** structure defining font attributes.
fontPath	*(Optional for Windows)* A path to the font file. Set only if **lf** is not present.
afmPath	*(Optional for Windows)* A path to the font AFM file. Set only if **lf** is not present.
fontID	Macintosh FOND id.
fontStyle	Macintosh style value within that Fond. The default value is 0.

PDTextSelectRange

PDTextSelectRangeRec

```
typedef struct _t_PDTextSelectRange {
ASInt32 start;
ASInt32 end;
ASInt32 ofsStart;
ASInt32 ofsEnd;
} PDTextSelectRangeRec, *PDTextSelectRange;
```

Description

Data structure used to specify a range of text in a text selection.

Use 0 for **ofsStart** and **ofsEnd** for whole-word selections. Nonzero values for **ofsStart** and **ofsEnd** are supported by **PDText** but are currently ignored by the Acrobat viewer's user interface code (which highlights only whole-word selections). If **ofsEnd** is 0, **end** is the first word *not* selected.

Header File

PDExpT.h

Related Methods

PDTextSelectCreateRanges
PDTextSelectGetRange

Members

start	Word offset of the word containing the start of the selection.
end	Word offset of the word containing the end of the selection.
ofsStart	Character offset into **start** of the start of the selection.
ofsEnd	Character offset into **end** of the end of the selection.

PDTextState

PDTextStateP

```
typedef struct _t_PDTextState {
PDFont font;
ASFixed charSpacing;
ASFixed wordSpacing;
ASFixed horizontalScale;
ASFixed leading;
ASFixed textRise;
ASFixed textSize;
ASInt32 renderMode;
ASFixedMatrix textMatrix;
} PDTextState, *PDTextStateP;
```

Description

Data structure containing information about the current text state.

Header File

PDExpT.h

Related Methods

PDTextGetState

PDThumbCreationServer

```
typedef struct _t_PDThumbCreationServer {
ASSize_t size;
PDThumbCreationNotifyPageProc NotifyPage;
PDThumbCreationGetThumbDataProc GetThumbData;
PDThumbCreationDrawThumbProc DrawThumb
} PDThumbCreationServerRec, *PDThumbCreationServer;
```

Description

Data structure containing callbacks that implement a creation server. The callbacks implement the creation server functions.

Header File

PDExpt.h

Related Methods

PDDocCreateThumbs

Members

size	Size of the data structure. Must be set to **sizeof(PDThumbCreationServerRec)**.

PDTile

PDTileRec

```
typedef struct {
ASUns32 overlap;
ASBool center;
ASInt32 marksflags;
ASInt32 paperWidth;
ASInt32 paperHeight;
char *docTitle;
char *docDate;
char *docTime;
ASInt32 col;
ASInt32 row;
ASInt32 numCols;
ASInt32 numRows;
ASInt32 xOffset;
ASInt32 yOffset;
}PDTileRec, *PDTile;
```

Description

Printing flags.

Header File

PDExpT.h

Related Notifications

PDDocDidPrintTiledPage
PDDocPrintingTiledPage
PDDocWillPrintTiledPage

Members

overlap	# of points to overlap (UI units may anything, clients convert to point).
center	Center the page's contents on the physical paper.

marksflags	What printer marks do we emit? They are as follows: #define **kPDEmitNoMarks 0**—nothing #define **kPDEmitWesternTileMarks 0x0001**—tile marks #define **kPDEmitEasternTileMarks 0x0002**—tile marks #define **kPDEmitSlug 0x0004**—emit info about document, name, page #, etc.
paperWidth	Width of paper, client-provided, since client has PPD access.
paperHeight	The height of the paper.
docTitle	Title string for slug (optional).
docDate	Date string for slug (optional).
docTime	Time string for slug (optional).
The remaining fields are for communicating during print time: the current page's state; which page is being printed, etc.	
col	Column.
row	Row.
numCols	Number of columns.
numRows	Number of rows.
xOffset	x offset.
yOffset	y offset.

PIHandshakeData_V0200

```
typedef struct {
ASUns32 handshakeVersion;
ASAtom appName;
ASAtom extensionName;
PIExportHFTsProcType exportHFTsCallback;
PIImportReplaceAndRegisterProcType
importReplaceAndRegisterCallback;
PIInitProcType initCallback;
PIUnloadProcType unloadCallback;
} PIHandshakeData_V0200;
```

Description

Structure describing plug-in data for handshaking with the Acrobat viewer.

Header File

PIVersn.h

Related Callbacks

PIHandshake

Related Methods

None

Members

handshakeVersion	*(Required)* Handshake version. Always use **HANDSHAKE_V0200**.
appName	*(Optional)* Name of host application.
extensionName	*(Required)* Name of the plug-in.
exportHFTsCallback	*(Optional)* Callback to register the HFTs this plug-in is exporting. May be **NULL**.
importReplaceAndRegisterCallback	*(Optional)* Callback to import other plug-ins' HFTs, replace HFT functions, and register for notifications. May be **NULL**.
initCallback	*(Required)* Callback for plug-in to initialize itself.
unloadCallback	*(Optional)* Callback to clean up when the plug-in terminates. May be **NULL**.

Predefined Cursors

Description

A group of predefined cursors.

Header File

AVExpT.h

Related Methods

AVSysGetStandardCursor

Cursor	Design
ARROW_CURSOR	
IBEAM_CURSOR	
CROSSHAIR_CURSOR	
BOX_IBEAM_CURSOR	
HAND_CURSOR	
FIST_CURSOR	
ZOOM_IN_CURSOR	
ZOOM_OUT_CURSOR	
ZOOM_MAX_CURSOR	
LINK_CURSOR	
GROW_CURSOR	
BAR_IBEAM_CURSOR	
WAIT_CURSOR	
MOVEPAGE_CURSOR	
COPYPAGE_CURSOR	
MOVEPAGES_CURSOR	
COPYPAGES_CURSOR	
REPLACEPAGE_CURSOR	
REPLACEPAGES_CURSOR	

Cursor	Design
NOP_CURSOR	
THREAD_CURSOR	
WORDFINDER_CURSOR	
HIDDEN_CURSOR	
GROWTOPLEFT_CURSOR	
GROWBOTTOMLEFT_CURSOR	
MOVE_CURSOR	
HAND_THREAD_UP_CURSOR	
HAND_THREAD_END_CURSOR	
HAND_THREAD_UP_END_CURSOR	
HAND_THREAD_BEGIN_CURSOR	
THREAD_CONNECT_CURSOR	
THREAD_END_CURSOR	
VERT_IBEAM_CURSOR	
GROWLEFTRIGHT_CURSOR	
HIGHLIGHT_CURSOR	
GROWTOPBOTTOM_CURSOR	
CROPTOOL_CURSOR	 *New in 5.0*
CROPTOOL_SCISSORS_CURSOR	 *New in 5.0*
DRAGLEFTRIGHT_CURSOR	 *New in 5.0*
DRAGUPDOWN_CURSOR	 *New in 5.0*
VERTBEAMNOBAR_CURSOR	 *New in 5.0*

ProgressMonitor

ProgressMonitorRec

```
typedef struct _t_ProgressMonitor {
ASSize_t size;
PMBeginOperationProc beginOperation;
PMEndOperationProc endOperation;
PMSetDurationProc setDuration;
PMSetCurrValueProc setCurrValue;
PMGetDurationProc getDuration;
PMGetCurrValueProc getCurrValue;
PMSetTextProc setText;
} ProgressMonitorRec, *ProgressMonitor;
```

Description

Replaced by **ASProgressMonitor** in Acrobat 5.0.

Data structure containing callbacks that implement a progress monitor. The callbacks implement the progress monitor functions. A progress monitor is used to display progress during potentially time-consuming operations. Progress monitors are included as parameters in many API calls. Acrobat's built-in progress monitor can be obtained by calling **AVAppGetDocProgressMonitor**.

Header File

ASExpT.h

Related Methods

AVAppGetDocProgressMonitor
PDDocCreateThumbs
PDDocSave

Members

size	Size of the data structure. Must be set to **sizeof(ProgressMonitorRec).**

Punctuation Characters

Description

Constants that specify various punctuation characters.

Header File

`WinAnsiResources.c`

Related Methods

Numerous

Character	Description
acute	´
ampersand	&
asciicircumflex	^
asciitilde	~
asterisk	*
at	@
backslash	\
bar	|
braceleft	{
braceright	}
bracketleft	[
bracketright	]
cedilla	¸
cent	¢
colon	:
comma	,
copyright	©
currency	¤

Character	Description
degree	°
dieresis	¨
divide	÷
dollar	$
equal	=
exclamation point	!
exclamdown	¡
grave	`
greaterthan	>
guillemotleft	«
guillemotright	»
hyphen	-
lessthan	<
logicalnot	¬
macron	¯
multiply	*
numbersign	#
onehalf	$^1/_2$
onequarter	$^1/_4$
ordfeminine	ª
ordmasculine	º
paragraph	¶
parenleft	(
parenright	)
percent	%
period	.

Character	Description
periodcentered	·
plus	+
plusminus	±
question mark	?
questiondown	¿
quotedbl	“
quotesingle	‘
registered	®
section	§
semicolon	;
slash	/
space	“ “
sterling	£
threequarters	$^3/_4$
underscore	_
yen	¥

Security Info Flags

Description

Constants used to specify various information about the Acrobat viewer's security and permissions.

Header File

PDExpT.h

Related Methods

PDDocGetNewSecurityInfo

Members

pdInfoHasOwnerPW	The document has an owner password.
pdInfoHasUserPW	The document has a user password.
pdInfoCanPrint	The document can be printed.
pdInfoCanEdit	The document can be modified, for example by adding notes, links, or bookmarks (see also **pdInfoCanEditNotes**).
pdInfoCanCopy	The document text and graphics can be copied to the clipboard.
pdInfoCanEditNotes	The document's notes, but nothing else, can be modified (see also **pdInfoCanEdit**).

StdPassword

```
typedef char StdPassword[MAX_PWCHARS+1];
```

Description

Character string containing a password for the standard Acrobat security handler.

Header File

PDExpT.h

Related Types

StdSecurityData

Related Callbacks

None

Related Methods

None

StdSecurityData

StdSecurityDataRec

```
typedef struct _t_StdSecurityData {
os_size_t size;
ASBool newUserPW;
ASBool hasUserPW;
StdPassword userPW;
ASBool newOwnerPW;
ASBool hasOwnerPW;
StdPassword ownerPW;
PDPerms perms;
Int32 keyLength; /*new in Acrobat 5.0*/
} StdSecurityDataRec, *StdSecurityData;
```

Description

Structure describing the data for the standard security handler provided in the Acrobat viewer.

Header File

PDExpT.h

Related Callbacks

None

Related Methods

None

Members

size	Size of the data structure. Must be set to **sizeof(StdSecurityDataRec).**
newUserPW	**true** if the user password should be changed, **false** otherwise.
hasUserPW	**true** if a user password is provided, **false** otherwise.
userPW	The user password.
newOwnerPW	**true** if the owner password should be changed, **false** otherwise.
hasOwnerPW	**true** if an owner password is provided, **false** otherwise.

ownerPW	The owner password.
perms	The permissions to allow for a file. See PDTypes.h.
keyLength	*(New in Acrobat 5.0)* Encryption key length, in bytes.

Tool Button Flags

Description

Constants that specify whether a toolbar button is external to the viewer or not.

Header File

AVExpT.h

Related Methods

AVToolButtonSetExternal

Members

TOOLBUTTON_INTERNAL	Indicates toolbar button is visible only in the viewer's toolbar.
TOOLBUTTON_EXTERNAL	Indicates toolbar button is visible only in the toolbar of an external application (such as a Web browser).

Transition Duration

Description

Duration of a **PDTrans**.

Header File

PDExpT.h

Related Methods

PDTransNew

Members

fxDefaultPageDuration	Constant used to indicate that there is no page timing information available.
fxDefaultTransDuration	Default duration for a transition.

WinPort

```
typedef struct _t_WinPort {
HWND hWnd;
HDC hDC;
} WinPortRec, *WinPort;
```

Description

The **HWND** is that of the document window's **AVPageView** region (the portion of the window in which the PDF file's pages are drawn).

Header File

AVExpT.h

Related Methods

AVPageViewAcquireMachinePort

Word Attributes

Description

Constants that specify various attributes of words.

Header File

PDExpT.h

Related Methods

PDWordGetAttr

Members

WXE_ADJACENT_TO_SPACE	The character following the end of the word is a space (either an explicit space character encoded in a string, or one that appears implicitly because the drawing point was moved).
WXE_HAS_UNMAPPED_CHAR	One or more characters in the word cannot be represented in the output font encoding.
WXE_HAS_LIGATURE	The word contains a ligature.
WXE_HAS_DIGIT	One or more characters in the word are digits.
WXE_HAS_HYPHEN	There is a hyphen in the word.
WXE_HAS_SOFT_HYPHEN	There is a soft hyphen in the word.
WXE_HAS_PUNCTUATION	One or more characters in the word are punctuation marks. Other flag bits can be checked to test whether the punctuation was at the beginning of the word (**WXE_HAS_LEADING_PUNC**), the end of the word (**WXE_HAS_TRAILING_PUNC**), or elsewhere in the word.
WXE_HAS_LEADING_PUNC	The first character in the word is a punctuation mark. If this bit is set, **WXE_HAS_PUNCTUATION** will also be set.
WXE_HAS_TRAILING_PUNC	The last character in the word is a punctuation mark. If this bit is set, **WXE_HAS_PUNCTUATION** will also be set.
WXE_HAS_NONALPHANUM	The word contains a character outside the range of A-Z, a-Z, 0-9.

WXE_HAS_LETTER	The word contains a character between A-Z or a-z.
WXE_HAS_UPPERCASE	The word contains a character between A-Z.
WXE_LAST_WORD_ON_LINE	The word is at the end of the current text line (i.e., the word is followed by a line break).
WXE_ROTATED	The writing direction of the word is not in a multiple of 90 degrees or the bounding box of the text is skewed. This flag indicates that the quads of the word should be used to specify the highlight area correctly.
WXE_VERTICAL_FLOW	The writing direction of the word is either 90 or 180 degrees. This flag ignores the page rotation parameter of the page dictionary. Therefore, if the page is rotated 90 degrees, this flag will be set on each word that appears horizonally on the screen.

Word Finder Sort Order Flags

Description

Constants that specify which tables the word finder is to fill.

Header File

PDExpT.h

Related Methods

PDDocCreateWordFinder
PDDocCreateWordFinderUCS

Members

WXE_PDF_ORDER	Enumerates words in the order they appear in the PDF file. This order may not the same as that in which a person would read them on a page.
WXE_XY_SORT	Enumerates words sorted by their x– and y–coordinates on the page. For a page with a single column of text, this is usually close to the order in which a person would read the text on the page.

Lists

AVCommand Descriptions (Built-in Commands)

Comments Group [Comments]	
Command	**Parameters**
Delete All Comments [**DeleteAll**]	None
Summarize Comments **[Summarize]**	**kCommentsCmdKeySortBy** : **ASInt32**
(Filter can only be specified by the user as the command is run. Set **kAVCommandUIInteractive** to allow user to configure the filter. With configuration dialog, the Output folder option will not be shown if **AVDoc** input is set.)	**kCommentsCmdKeyOutputPath** : **ASPathName**
	kCommentsCmdKeySaveWithOriginal : **ASBool** If **true**, the command writes the file to the path specified by the "OutputPath" parameter.

Document Group [Document]	
Command	**Parameters**
Accessibility Checker [**AccessibilityCheck**]	**kAccCheckCmdKeyCreateLog** : **ASBool** Defaults to **true**.
If **keypages** is selected page and **AVDoc** is **NULL**, the first page is processed.	**kAccCheckCmdKeyCreateComments : ASBool** Defaults to **false**.
	kAccCheckCmdKeyFileSys : kASValuePointer **kAccCheckCmdKeyPathText** : **ASText** Log file destination. If **FileSys** is **NULL**, the log file is written to the destination directory. If **PathText** isn't specified, the log is written to the same directory as the source document. If **FileSys** is supplied, the file is opened through that file system; otherwise the default is used.
	kAccCheckCmdKeyAlternateText : **kASValueBool** Defaults to **true**.

Document Group [Document]	
Command	**Parameters**
	kAccCheckCmdKeyLanguageSpecified : **kASValueBool** Defaults to **true**.
	kAccCheckCmdKeyCharEncodings : **kASValueBool** Defaults to true.
	kAccCheckCmdKeyCheckStructure : **kASValueBool** Defaults to true.
	kAccCheckCmdKeyFieldDescriptions : **kASValueBool** Defaults to true.
	kAccCheckCmdKeyPages : **kASValueInteger** Defaults to all pages. If **keypages** is selected page and **avdoc** is **NULL**, the first page is processed.
	kAccCheckCmdKeyFromPage : **kASValueInteger** Defaults to **0**.
	kAccCheckCmdKeyToPage : **kASValueInteger** Defaults to **0**.
	kAccCheckCmdKeyInBatch : **kASValueBool** Controls the dialog.
Document Summary [**GeneralInfo**]	**kDocInfoCmdKeyTitle** : **ASText**
	kDocInfoCmdKeySubject : **ASText**
	kDocInfoCmdKeyAuthor : **ASText**
	kDocInfoCmdKeyKeywords : **ASText**
	kDocInfoCmdKeyBinding : **ASText**
	kDocCmdKeyLeaveAsIs : **ASCab** All values that are to be left untouched. If cabinet is not present, or a key is not present, it is assumed to be a valid value in the cab.
Embed All Thumbnails [**CreateAllThumbs**]	None

Document Group [Document]	
Command	**Parameters**
Extract Images As JPEG [**ExtractAsJpeg**]—See "Image Conversion Commands," below.	**kExtractJpegCmdKeyCompression** : **kASValueInteger** Defaults to **JPEG_WRITE_COMPRESSION_MEDIUM**
	kExtractJpegCmdKeyFormat : **kASValueInteger** Defaults to **JPEG_WRITE_FORMAT_BASELINE**
Extract Images As PNG [**ExtractAsPng**]—See "Image Conversion Commands," below.	**kExtractPngCmdKeyInterlace** : **kASValueInteger** Defaults to **PNG_WRITE_INTERLACE_NONE**
	kExtractPngCmdKeyFilter : **kASValueInteger** Defaults to **PNG_WRITE_FILTER_ADAPTIVE**
Extract Image As TIFF [**ExtractAsTiff**]—See "Image Conversion Commands," below.	**kExtractTiffCmdKeyMonoCompression** : **kASValueInteger** Defaults to **TIFF_WRITE_COMPRESSION_CCITT_G4**
	kExtractTiffCmdKeyColorCompression : **kASValueInteger** Defaults to **TIFF_WRITE_COMPRESSION_LZW**
Print [**Print**]	None. If UIPolicy is Interactive, the standard print dialog is displayed; otherwise the default print settings are used.
Remove Embedded Thumbnails [**DeleteAllThumbs**]	None
Security [**DocSecurity**]	**kDocCmdsKeyCryptHandler** : **kASValueAtom** Defaults to **ASAtomNull**
	kDocCmdsKeySecuritySettings : **kASValueCab**
Set Open Options [**OpenInfo**]—Everything defaults to "LeaveAsIs"	**kOpenOptionsCmdKeyPageNum** : **kASValueText** e.g., "1"
	kOpenOptionsCmdKeyMagnification : **kASValueText** e.g., "100%" : Open action

Document Group [Document]	
Command	**Parameters**
	kOpenOptionsCmdKeyPageLayout : **kASValueInteger** e.g., **PDLayoutSinglePage**
	kOpenOptionsCmdKeyPageMode : **kASValueInteger** e.g., **PDUseThumbs**
	kOpenOptionsCmdKeyFullScreen : **kASValueBool**
	kOpenOptionsCmdKeyHideToolbar : **kASValueBool**
	kOpenOptionsCmdKeyHideMenubar : **kASValueBool**
	kOpenOptionsCmdKeyHideWindowUI : **kASValueBool**
	kOpenOptionsCmdKeyFitWindow : **kASValueBool**
	kOpenOptionsCmdKeyCenterWindow : **kASValueBool**
	kOpenOptionsCmdKeyDisplayDocTitle : **kASValueBool**
	kDocCmdKeyLeaveAsIs : **kASValueCab** "LeaveAsIs" rules apply

JavaScript Group [JavaScript]	
Command	**Parameters**
Execute JavaScript [**JavaScript**]	**kExecJavaScriptName : kASValueText** Not currently used
	kExecJavaScriptCode : kASValueText

Page Group [Page]	
Command	**Parameters**
Common Parameters	**kPageCmdKeyGroup** : **kASValueInteger**
	kPageCmdKeyEvenOdd : **kASValueInteger**

Page Group [Page]	
Command	**Parameters**
	kPageCmdKeyFrom : **kASValueText**
	kPageCmdKeyTo : **kASValueText**
Crop Pages [**CropPages**]	**kCropPagesCmdKeyCropType** : **kASValueInteger** Defaults to **kAVCropCustom**
(**kPageCmdKeyGroup** defaults to **kAVPagesAll**. **kPageCmdKeyEvenOdd** defaults to **kAVPagesEvenOdd**. If cropping to bounding box, the dimension params are ignored.)	**kCropPagesCmdKeyLeft** : **kASValueDouble** Defaults to **0.0**
	kCropPagesCmdKeyRight : **kASValueDouble** Defaults to **0.0**
	kCropPagesCmdKeyTop : **kASValueDouble** Defaults to **0.0**
	kCropPagesCmdKeyBottom : **kASValueDouble** Defaults to **0.0**
Delete Pages [**DeletePages**]	No specific. **kPageCmdKeyEvenOdd** not supported. **kPageCmdKeyGroup** defaults to **kAVPagesFromTo**. **kAVPagesSelected** must be combined with an **AVDoc**.
Insert Pages [**InsertPages**]	**kInsertPagesCmdKeyInsertBefore** : **kASValueBool** Defaults to false—i.e., after.
	kInsertPagesCmdKeyPosition : **kASValueInteger** Defaults to **kAVPosRelativeToPage**
	kInsertPagesCmdKeyPageString : **kASValueText** Defaults to **1**
	kInsertPagesCmdKeySrcFileName : **kASValueText** No use other than dialogs.
	kInsertPagesCmdKeySourcePathNames : **kASValueCab** Contains a series of **ASPathName**s
Number Pages [**NumberPages**]	**kNumberPagesCmdKeyStyle** : **kASValueInteger** Defaults to **kPageLabelStyleNone**

Page Group [Page]	
Command	**Parameters**
(**kPageCmdKeyGroup** defaults to **kAVPagesAll**. **kPageCmdKeyEvenOdd** defaults to **kAVPagesEvenOdd**.)	**kNumberPagesCmdKeyStart** : **kASValueInteger** Defaults to **1**
	kNumberPagesCmdKeyMergePrevious : **kASValueBool** Defaults to **false**
	kNumberPagesCmdKeyPrefix : **kASValueString** Defaults to ""
Rotate Pages [**RotatePages**]	**kRotatePagesCmdKeyDegrees** : **kASValueInteger** Defaults to **pdRotate90**
(**kPageCmdKeyGroup** defaults to **kAVPagesAll**. **kPageCmdKeyEvenOdd** defaults to **kAVPagesEvenOdd**.)	**kRotatePagesCmdKeyAction** : **kASValueInteger** Defaults to **kAVRotateEveryPage**

PDF Consultant Group [PDF Consultant]	
Command	**Parameters**
Audit Space Usage [**SpaceAuditAgent**]	None. Entirely interactive.
Detect And Remove [**VirusCheck**]	**kVirusCheckCmdKeyOptions** : **kASValueCab** Defaults to **stuff**.
	kVirusCheckCmdKeyNumOptions : **kASValueInteger** Defaults to **5**.
	kVirusCheckCmdKeyRemove : **kASValueBool** Defaults to **false**.
Optimize Space [**SpaceReductionAgent**]	**kOptSpaceCmdKeyRemoveBmarks** : **kASValueBool** Defaults to **true**
	kOptSpaceCmdKeyRemoveLinks : **kASValueBool** Defaults to **true**
	kOptSpaceCmdKeyRemoveDests : **kASValueBool** Defaults to **true**

PDF Consultant Group [PDF Consultant]	
Command	**Parameters**
	kOptSpaceCmdKeyDestConversionType : **kASValueInteger** Defaults to **kOptSpaceRemoveUnused**

Image Conversion Commands (Document Group)
Use of Image Conversion Commands
• "BaseFileName"—Used to build the output file string. If not set, handler uses the name of the **PDDoc** parameter. Must be passed in the input's **ASCab**, not the params. • "Configured"—Must be set to **true** to mark the command parameters as being in a valid state. • "ConversionFormat"—Set to the format that you are exporting to. • "Batch"—Used to control the format of the settings dialog. **true** will get the dest folder info. • "DestDirectory"—Must be passed, or command will return in error. • "Overwrite"—Whether files are overwritten. Defaults to **true**. If set to **false**, and output file is found to exist, alert is show if in batch; otherwise the user is given the option to overwrite. • The following are common parameters:
kExtractImgCmdKeyConfigured : **kASValueBool**
kExtractImgCmdKeyConvFormat : **kASValueInteger**—Defaults to appropriate value—**JPEG**, **TIFF**, **PNG**
kExtractImgCmdKeyOverwriteFiles : **kASValueBool**—Defaults to **true**
kExtractImgCmdKeyInBatch : **kASValueBool**—Defaults to **true**
kExtractImgCmdKeyColorSpace : **kASValueInteger**—Defaults to **COLORSPACE_AUTO**
kExtractImgCmdKeyResolution : **kASValueInteger**—Defaults to **RESOLUTION_AUTO**
kExtractImgCmdKeyDestDirectory : **kASValuePathName**—Defaults to the **kAVSCUser**/**kAVSFDocuments** folder
kExtractImgCmdKeyBaseFileName : **kASValueString**—Defaults to source **PDDoc** filename

CosObjEnum Actions

Methods: `CosObjEnum`

Object type	Action
`scalar or string`	Returns **`true`**.
`dictionary`	Calls **`proc`** for each key/value pair. **`obj`** is key, **`value`** is value.
`array`	Calls **`proc`** for each element. **`obj`** is element, **`value`** is invalid.
`stream`	Calls **`proc`** on stream's attribute dictionary. **`obj`** is dict, **`value`** is invalid.

Enumerators

ASCabEnum
ASEnumExtensions
AVAppEnumActionHandlers
AVAppEnumAnnotHandlers
AVAppEnumDocs
AVAppEnumSystemFonts
AVAppEnumTools
AVAppEnumTransHandlers
AVConversionEnumFromPDFConverters
AVConversionEnumToPDFConverters
AVDocEnumSelection
AVDocSelectionEnumPageRanges
AVMenubarAcquireMenuByPredicate
AVMenubarAcquireMenuItemByPredicate
AVToolBarEnumButtons
CosDocEnumEOFs
CosDocEnumIndirect
CosObjEnum
PDCharProcEnum
PDDocEnumFonts
PDDocEnumLoadedFonts
PDDocEnumResources
PDEAttrEnumTable
PDEEnumElements
PDEClipFlattenedEnumElems
PDEnumDocs
PDEnumSysFonts

PDEObjectDump
PDFontEnumCharProcs
PDFormEnumPaintProc
PDFormEnumResources
PDNameTreeEnum
PDNumTreeEnum
PDPageEnumContents
PDPageEnumResources
PDPathEnum
PDTextEnum
PDTextSelectEnumQuads
PDTextSelectEnumText
PDTextSelectEnumTextUCS
PDWordFinderEnumWords
PDXObjectEnumFilters
PDXObjectGetData

Font Subtypes

Methods: **PDFontGetSubtype**

Subtype	Description
CIDFontType0	Type 0 CID font
CIDFontType2	Type 2 CID font
Type0	Type 0 PostScript font
Type1	Type 1 PostScript font
Type3	Type 3 PostScript font
MMType1	Type 1 multiple master PostScript font
TrueType	TrueType font

Glyph Names of Word Separators

Methods: **PDDocCreateWordFinder**
PDDocCreateWordFinderUCS
PDWordSplitString

ampersand	comma	greater	parenleft	registered
asciicircum	copyright	guillemotleft	parenright	section
asciitilde	currency	guillemotright	percent	semicolon
asterisk	dagger	guilsinglleft	period	slash
at	daggerdbl	guilsinglright	periodcentered	space
backslash	degree	hyphen	perthousand	sterling
bar	divide	less	plus	threequarters
braceleft	dollar	logicalnot	plusminus	threesuperior
braceright	ellipsis	multiply	question	tilde
bracketleft	emdash	numbersign	questiondown	trademark
bracketright	endash	onehalf	quotedbl	twosuperior
brokenbar	equal	onequarter	quotedblbase	underscore
bullet	exclam	onesuperior	quotedblleft	yen
cent	exclamdown	ordfeminine	quotedblright	
circumflex	florin	ordmasculine	quoteleft	
colon	fraction	paragraph	quotesinglbase	

Key Codes

Header file: ASKey.h

Key Code—All platforms	Value
ASKEY_ARROW_D	31
ASKEY_ARROW_L	28
ASKEY_ARROW_R	29
ASKEY_ARROW_U	30
ASKEY_ESCAPE	27
ASKEY_HELP	5
ASKEY_PAGE_D	12
ASKEY_PAGE_U	11
ASKEY_SPACE	32
ASKEY_TAB	9

Key Code—Windows	Value
ASKEY_DEL	127
ASKEY_END	1
ASKEY_ENTER	13
ASKEY_HOME	4
ASKEY_MENU	2

Key Code—Macintosh	Value
ASKEY_CLEAR	27
ASKEY_CR	13

Key Code—Macintosh	Value
ASKEY_DEL	8
ASKEY_END	4
ASKEY_ENTER	3
ASKEY_HOME	1

Key Code—UNIX	Value
ASKEY_CLEAR	27
ASKEY_CR	13
ASKEY_DEL	8
ASKEY_END	4
ASKEY_ENTER	10
ASKEY_HOME	1

Language Codes

Methods: **AVAppGetLanguage**

Code	Language
ARA	Arabic
CHS	Chinese Simplified
CHT	Chinese Traditional
DAN	Danish
DEU	German
ENU	English
ESP	Spanish
FRA	French
HEB	Hebrew
ITA	Italian
JPN	Japanese
KOR	Korean
NLD	Dutch
NOR	Norwegian
PTB	Portuguese
SUO	Finnish
SVE	Swedish

Menu Item Names

Menus are listed in their order on the menubar.

Methods: **AVMenubarAcquireMenuByName**

Acrobat Menu Item Names (Note: Many of these are not available in Reader)
File <submenu>
Open
Web2PDF:OpnURL
OpenAsPDF
endFileAccessGroup
Close
Save
SaveAs
Revert
endSaveGroup
Import <submenu>
Scan
ImportNotes
AcroForm:ImportFDF
Export <submenu>
ExtractImages <submenu>
ExtractImages:JPEG
ExtractImages:PNG
ExtractImages:TIFF
ExportNotes
AcroForm:ExportFDF
AcroSendMail:SendMail
endImportExportGroup

Acrobat Menu Item Names (Note: Many of these are not available in Reader)
DocInfo <submenu>
GeneralInfo
endGeneralInfoGroup
OpenInfo
FontsInfo
PrepressInfo
EScript:DataObjects
AutoIndex:DocInfo
ShowDocumentMetadataDialog
Weblink:Base
DocSecurity
endDocInfoGroup
Batch <submenu>
BatchEdit
AVSequenceMenuItemAtom-0
AVSequenceMenuItemAtom-1
AVSequenceMenuItemAtom-2
AVSequenceMenuItemAtom-3
AVSequenceMenuItemAtom-4
AVSequenceMenuItemAtom-5
AVSequenceMenuItemAtom-6
AVSequenceMenuItemAtom-7
Annots:GoBackOnline
endBatchGroup
PageSetup
Print
endPrintGroup

Acrobat Menu Item Names (Note: Many of these are not available in Reader)
RecentFile1
RecentFile2
RecentFile3
RecentFile4
RecentFile5
RecentFile6
RecentFile7
RecentFile8
endRecentFileGroup
Quit
Edit <submenu>
Undo
Redo
endUndoGroup
Cut
Copy
Paste
Clear
endEditGroup
CopyFileToClipboard
endOleGroup
SelectAll
DeselectAll
endSelectGroup
Find
FindAgain
AcroSrch:Tools <submenu>

Acrobat Menu Item Names (Note: Many of these are not available in Reader)
AcroSrch:Query
AcroSrch:Indexes
AcroSrch:Results
AcroSrch:Assist
AcroSrch:PrevDoc
AcroSrch:PrevHit
AcroSrch:NextHit
AcroSrch:NextDoc
AcroSrch:Separator
Properties
endPropertiesGroup
Prefs <submenu>
GeneralPrefs
endGeneralPrefsGroup
FICL:Browser_Prefs
BCLC:Table/Formatted_TextPreferences
Web2PDF:Prefs
Web2PDF:InetControlPanel
Document <submenu>
FirstPage
PrevPage
NextPage
LastPage
GoToPage
endPageNavGroup
GoBackDoc
GoBack

Acrobat Menu Item Names (Note: Many of these are not available in Reader)
GoForward
GoForwardDoc
endGoBackGroup
InsertPages
ExtractPages
ReplacePages
DeletePages
endDocumentOpGroup
CropPages
RotatePages
endPageOpGroup
NumberPages
AcroForm:Actions
Tools <submenu>
Annots:Collab <submenu>
Annots:SummarizeComments
Annots:FilterManager
Annots:FindAnnot
Annots:Separator
Annots:DeleteAllComments
DigSig:Compare <submenu>
DIGSIG:CompareDocuments
DIGSIG:CompareRevisions
DIGSIG:DigitalSignatures <submenu>
DIGSIG:PlaceSigPullRight
DIGSIG:SignDocPullRight
DIGSIG:SignSigPullRight

Acrobat Menu Item Names (Note: Many of these are not available in Reader)
Separator
DIGSIG:ClearPullRight
DIGSIG:ClearAll
DIGSIG:DeletePullRight
Separator
DIGSIG:ValidSigPullRight
DIGSIG:ValidateAll
Separator
DIGSIG:RollbackPullRight
DIGSIG:DifferencePullRight
Separator
DIGSIG:GoTo
Separator
DIGSIG:PropertiesPullRight
ppklite:Main <submenu>
ppklite:Login
ppklite:Logout
ppklite:UserSettings
Spelling:Spelling <submenu>
Spelling:Check Spelling
Spelling:Edit Dictionary
Web2PDF:SpdrSubMnuItm <submenu>
Web2PDF:OpnURL2
Web2PDF:AppURL
Web2PDF:AppLinks
Web2PDF:ViewLinks
Web2PDF:Update

Acrobat Menu Item Names (Note: Many of these are not available in Reader)
Web2PDF:SepAfterUpdt
Web2PDF:PgInfo
Web2PDF:SepPgInfo
Web2PDF:OpenInBrowser
Web2PDF:FrontStsDlgs
endToolsSubGroup1
AccCheck:DoCheck
CatalogPlugin
Distiller
AcroForm:Tools <submenu>
AcroForm:Fields <submenu>
AcroForm:Duplicate
AcroForm:TabOrder
AcroForm:Separator
AcroForm:Align <submenu>
AcroForm:AlignLeft
AcroForm:AlignRight
AcroForm:AlignTop
AcroForm:AlignBottom
AcroForm:Separator
AcroForm:AlignVertical
AcroForm:AlignHorizontal
AcroForm:Center <submenu>
AcroForm:CenterVertical
AcroForm:CenterHorizontal
AcroForm:CenterBoth
AcroForm:Distribute <submenu>

Acrobat Menu Item Names (Note: Many of these are not available in Reader)
AcroForm:DistributeVertical
AcroForm:DistributeHorizontal
AcroForm:Size <submenu>
AcroForm:SizeVertical
AcroForm:SizeHorizontal
AcroForm:SizeBoth
AcroForm:Template
AcroForm:Separator
AcroForm:CalcOrder
EScript:Tools <submenu>
EScript:JSConsole
EScript:JSEditAll
EScript:JSDocScripts
EScript:JSDocActions
Weblink:Tools <submenu>
Weblink:CreateURLs
Weblink:RemoveURLs
ADBE:Consultant <submenu>
ADBE:VirusCheck
ADBE:SpaceAudit
ADBE:SpaceReduction
TouchUp <submenu>
TouchUp:TextAttributes
TouchUp:TextBreaks
TouchUp:FitTextToSelection
TouchUp:Insert <submenu>
TouchUp:Insert:LineBreak

Acrobat Menu Item Names (Note: Many of these are not available in Reader)
TouchUp:Insert:SoftHyphen
TouchUp:Insert:NonBreakingSpace
TouchUp:Insert:EmDash
-
TouchUp:ShowLineMarkers
-
TouchUp:ShowCaptureSuspects
TouchUp:FindSuspect
WHAPI:ToolsSeperator
CreatePDF
PaperCapture
SearchPDF
Extensions <submenu>
FICL:Browser_Browser <submenu>
FICL:Browser_BrowseDocument
FICL:Browser_BrowsePage
View <submenu>
FullScreen
endFullScreenGroup
ZoomViewIn
ZoomViewOut
ZoomTo
endZoomTypeGroup
FitPage
ActualSize
FitWidth
FitVisible

Acrobat Menu Item Names (Note: Many of these are not available in Reader)
Reflow
endFitGroup
SinglePage
OneColumn
TwoColumns
endPageLayoutGroup
RotateCW
RotateCCW
endRotateViewGroup
ProofSetup <submenu>
ProofCustom
endProofCustomGroup
ProofInkBlack
ProofPaperWhite
ProofColors
Overprint
endProofingGroup
UseLocalFonts
ShowGrid
SnapToGrid
Window <submenu>
Cascade
Tile <submenu>
TileHorizontal
TileVertical
CloseAll
endWindowLayoutGroup

Acrobat Menu Item Names (Note: Many of these are not available in Reader)
Toolbars <submenu>
ShowHideAdobe &Online
ShowHide&Basic Tools
ShowHide&Commenting
ShowHide&Editing
ShowHide&File
ShowHideForm Calculator
ShowHide&Navigation
ShowHideView &History
ShowHide&Viewing
endToolbarsGroup
ShowHideToolBar
ShowHideMenuBar
ShowHideClipboard
endShowHideGroup
ShowHideArticles
ShowHideBookmarks
ShowHideAnnotManager
ShowHideDestinations
ShowHideFields
ShowHideInfo
ShowHideSignatures
ShowHideTags
ShowHideThumbnails
endShowHideWindowsGroup2
Inspectr:Tool
WindowMenuSeparator

Acrobat Menu Item Names (Note: Many of these are not available in Reader)
Help <submenu>
HelpUserGuide
endGuideGroup
TopIssues
AdobeOnline
Registration
endAOLGroup
AcroForm:FormsJSGuide
endCreateGroup
UsingExtensions <submenu>
FICL:Browser_Help
endUsingGroup
About
AboutAdobeExtensions
AboutExtensions <submenu>
FICL:Browser_About
ADBE:AboutHotlink
BCLC:Table/Formatted_TextAbout
Bookmarks <submenu>
NewBookmark
NewBookmarksFromStructure
endBookmarkOpGroup
FindCurrentBookmark
endBookmarkOpGroup
BookmarkShowLocation
MinimizeBookmarks
Thumbs <submenu>

Acrobat Menu Item Names (Note: Many of these are not available in Reader)
CreateAllThumbs
DeleteAllThumbs
SmallThumbs
LargeThumbs
Articles <submenu>
MinimizeArticles
Destinations <submenu>
NewDestination
LoadDestination
Info <submenu>
Points
Inches
Millimeters

Replaceable Methods

AVAlert
AVAppCanQuit
AVAppHandleAppleEvent
AVDocClose
AVDocDoPrint
AVDocDoSave
AVDocDoSaveAs
AVDocDoSaveAsWithParams
AVDocOpenFromFileWithParams
AVDocPrintPages
AVDocPrintPagesWithParams
AVPageViewGetNextView
PDDocSave
PDDocSaveWithParams
PDImageSelectAlternate

NOTE: These methods are replaceable in Reader—except for **AVDocDoPrint**, **AVDocDoSave**, **AVDocDoSaveAs**, **AVDocDoSaveAsWithParams**, **PDDocSave**, and **PDDocSaveWithParams**.

Selection Types

Selection Type	Description	Data Type	Details
Text	Text in the document	**PDTextSelect**	**PDDocCreateTextSelect**
Bitmap	Graphics	**AVGrafSelect**	**AVGrafSelectCreate**
Annotation	Annotation (text annotation, link, and so forth)		Allocate memory using **ASmalloc (sizeof(PDAnnot))**. The annotation selection server assumes the data was allocated through **ASmalloc**. Cast the desired annotation with **PDAnnotGetCosObj (annot)** and copy this Cos object into newly allocated memory. Pass a pointer to this copy.
Thumbnail	Thumbnail image	**int32**	Pass the page number (the first page in a document is page 0).

Toolbar Button Names

Buttons are listed in their order on the toolbars. In Acrobat 5.0, tool buttons are grouped by function on smaller toolbars.

In Acrobat 4.0 and later, tool buttons may be on toolbars (flyouts) attached to other tool buttons. Within the tables below, the '~' character beside the button name denotes that the button is on a flyout toolbar.

AdobeOnline Toolbar Button Names

Button name	Description
AdobeOnline	Visit Adobe on the World Wide Web.
endAOLGroup	Separator.

BasicTools Toolbar Button Names

Button name	Description
Hand	Tool to scroll within the document.
ZoomIn	Tool to increase the zoom factor.
~ ZoomOut	Tool to decrease the zoom factor.
endNavToolsGroup	Separator.
Select	Tool to select text.
~ SelectRect	Tool to select columns of text.
~ BCLC:Table/Formatted_TextZoneButton	Tool to select tables, or similarly formatted text.
SelectGraphics	Tool to select graphics.
endSelectToolsGroup	Separator.

Collab Toolbar Button Names

Button name	Description
Annots:Tool:SynchronizeComments	Synchronize document comments with server.
Annots:Tool:SendComments	Upload authored comments to server.
Annots:Tool:GetLatestComments	Download latest comments from server.
Annots:Tool:ToggleComments.	Show/hide comments.

Commenting Toolbar Button Names

Button name	Description
Annots:Tool:Text	Tool to create, select, or edit note annotations.
~ Annots:Tool:FreeText	Tool to create, select, or edit freetext annotations.
~ Annots:Tool:Sound	Tool to create, select, or edit sound annotations.
~ Annots:Tool:Stamp	Tool to create, select, or edit stamp annotations.
~ Annots:Tool:FileAttachment	Tool to create, select, or edit file attachments.
Annots:Tool:Ink	Tool to create, select, or edit pencil annotations.
~ Annots:Tool:Square	Tool to create, select, or edit square annotations.
~ Annots:Tool:Circle	Tool to create, select, or edit circle annotations.
~ Annots:Tool:Line	Tool to create, select, or edit line annotations.
Annots:Tool:Highlight	Tool to create, select, or edit text highlight annotations.
~ Annots:Tool:StrikeOut	Tool to create, select, or edit stuck-out text annotations.
~ Annots:Tool:Underline	Tool to create, select, or edit underlined text annotations.
Spelling:Tool:SpellTool	Tool to spell check form fields and annotations.
DigSigTool	Tool to digitally sign documents.
endNoteToolsGroup	Separator.

Editing Toolbar Button Names

Button name	Description
Acro_Movie:ToolButton	Tool to create, select, or edit movie objects.
Link	Tool to create, select, or edit links.
Thread	Tool to create, select, or edit article threads.
Crop	Tool to crop pages.
AcroForm:WidgetTool	Tool to create, select, or edit form fields.
TouchUp:TextTool	Tool to select or edit text.
~ TouchUp:ObjectTool	Tool to select or edit page objects.
~ TouchUp:FlowTool	Tool to edit.
endToolsGroup	Separator.

File Toolbar Button Names

Button Name	Description
Open	Open a file.
ADBE:SPDR:OpStatTlButton	Open a URL.
Save	Save the active PDF document.
SaveFileAs	Save a copy of the active PDF document. Available in external document views only.
Print	Print the active PDF document.
AcroSendMail:SendMail	Send the active PDF document through email.
endFileGroup	Separator.
Copy	Copy the current selection. Available in external document views only.
endCopyGroup	Separator.
Undo	Undo the most recent action. Available in external document views only.
Redo	Redo the most recent un-done action. Available in external document views only.
endUndoGroup	Separator.
FindDialog	Show the text search dialog.
FindAgainDialog	Search for the next instance of the current search string. Available in external document views only.
AcroHLS:Next	Jump to the next highlight. Available in external document views only.
AcroHLS:Prev	Jump to the previous highlight. Available in external document views only.
endDialogGroup	Separator.
ToggleSplitter	Show/hide the navigation pane.
endSplitterGroup	Separator.

Navigation Toolbar Button Names

Button Name	Description
FirstPage	Go to the first page in the document.
PreviousPage	Go to the previous page in the document.
NextPage	Go to the next page in the document.
LastPage	Go to the last page in the document.
endPageNavGroup	Separator.

ViewHistory Toolbar Button Names

Button name	Description
GoBack	Go to the previous view in the view history.
GoForward	Go to the next view in the view history.
endPageStackGroup	Separator.

Viewing Toolbar Button Names

Button name	Description
ZoomViewOut	Decrease the zoom factor by one increment.
ZoomTo	Set the zoom factor to a specific value.
ZoomViewIn	Increase the zoom factor by one increment.
endMagnifyGroup	Separator.
Zoom100	Set the zoom factor to 100% (that is, actual size).
FitPage	Set the zoom factor to fit the entire page in the document window.
FitWidth	Set the zoom factor to fit a portion of the page in the entire width of the document window.
Reflow	Reflow.
endZoomGroup	Separator.
RotateCW	Rotate the active view clockwise 90 degrees.
~ RotateCCW	Rotate the active view counterclockwise 90 degrees.
endRotateViewGroup	Separator.

Toolbar Names

Named toolbars were added in Acrobat 5.0.

Methods: **AVAppGetToolBarByName**

Toolbar Name	Present In Acrobat	Present In Reader
File	Yes.	Yes.
Navigation	Yes.	Yes.
ViewHistory	Yes.	Yes.
Viewing	Yes.	Yes.
AdobeOnline	Yes.	Yes.
BasicTools	Yes.	Yes.
Commenting	Yes.	No.
Editing	In internal document views only.	No.
Collab	In external document views only.	No.

Tool Names

Methods: `AVAppGetToolByName`

Tool Name	UI Label
Movie	“Movie Tool (M)”
Link	“Link Tool (L)”
Thread	“Article Tool (A)”
Crop	“Crop Tool (C)”
Widget	“Form Tool (F)”
Touch-Up Text Selection	“TouchUp Text Tool (T)”
Object Selection Type	“TouchUp Object Tool (T)” / “TouchUp Order Tool (T)”
Hand	“Hand Tool (H)”
Zoom	“Zoom In Tool (Z)” / “Zoom Out Tool (Z)”
Select	“Text Select Tool (V)” / “Column Select Tool (V)”
BCLC:Table/Formatted_TextZoneTool	“Table/Formatted Text Select Tool (V)”
SelectGraphics	“Graphics Select Tool (G)”
Text	“Note Tool (S)”
FreeText	“FreeText Tool (S)”
Sound	“Sound Attachment Tool (S)”
Stamp	“Stamp Tool (S)”
FileAttachment	“File Attachment Tool (S)”
Ink	“Pencil Tool (N)”
Square	“Square Tool (N)”
Circle	“Circle Tool (N)”
Line	“Line Tool (N)”
Highlight	“Highlight Tool (U)”
StrikeOut	“Strikeout Tool (U)”
Underline	“Underline Tool (U)”

Tool Name	UI Label
Squiggly	Not exposed through UI.
DigSigTool	“Digital Signature Tool (D)”

Type/Creator Codes

Type/Creator codes for **ASFileSysSetTypeAndCreator** method.

Creators		
kAcrobatCreatorCode	**ASFourCharCode('CARO')**	Acrobat Creator Code
kPhotoshopCreatorCode	**ASFourCharCode('8BIM')**	Photoshop Creator Code
kImageReadyCreatorCode	**ASFourCharCode('MeSa')**	ImageReady Creator Code
kIllustratorCreatorCode	**ASFourCharCode('ART5')**	Illustrator Creator Code

Acrobat Types -- NOTE: Set creator to kAcrobatCreatorCode!		
kPDFTypeCode	**ASFourCharCode('PDF ')**	Portable Document Format
kFDFTypeCode	**ASFourCharCode('FDF ')**	Forms Data Format
kXFDFTypeCode	**ASFourCharCode('XFDF')**	XML Forms Data Format
kPrefsTypeCode	**ASFourCharCode('PREF')**	Preferences File
kPDXTypeCode	**ASFourCharCode('PDX ')**	Acrobat Catalog Index file
kRMFTypeCode	**ASFourCharCode('RMF ')**	WebBuy Rights Management File
kAPFTypeCode	**ASFourCharCode('APF ')**	Acrobat Profile Format (PPKLite)

Acrobat Types -- NOTE: Set creator to kAcrobatCreatorCode!		
kSequenceTypeCode	**SFourCharCode('SEQU')**	Acrobat Sequence File
kDictionaryTypeCode	**ASFourCharCode('DICT')**	Spelling Dictionary File
kWHATypeCode	**ASFourCharCode('WHA ')**	Web-Hosted Apps File
kLocaleTypeCode	**ASFourCharCode('LANG')**	Locale File
kPluginTypeCode	**ASFourCharCode('XTND')**	Plug-In File

Photoshop Types -- NOTE: Set creator to kPhotoshopCreatorCode!		
kPSDTypeCode	**ASFourCharCode('8BIM')**	Photoshop PSD File
kPICTTypeCode	**ASFourCharCode('PICT')**	Mac PICT File
kTIFFTypeCode	**ASFourCharCode('TIFF')**	TIFF File
kGIFTypeCode	**ASFourCharCode('GIFf')**	GIF File
kJPEGTypeCode	**ASFourCharCode('JPEG')**	JPEG File
kPNGTypeCode	**ASFourCharCode('PNGf')**	PNG File

Illustrator Types -- NOTE: Set creator to kIllustratorCreatorCode!		
KAITypeCode	**ASFourCharCode('TEXT')**	Illustrator AI File
kEPSTypeCode	**ASFourCharCode('EPSF')**	EPS File

Misc Types/Creators		
kTextTypeCode	**ASFourCharCode('TEXT')**	Text File
kTextCreatorCode	**ASFourCharCode('ttxt')**	SimpleText
kQuickTimeTypeCode	**ASFourCharCode('MooV')**	QuickTime File
kQuickTimeCreatorCode	**ASFourCharCode('TVOD')**	QuickTime Player
kHTMLTypeCode	**ASFourCharCode('TEXT')**	HTML File
kHTMLCreatorCode	**ASFourCharCode('MSIE')**	Microsoft IE

View Destination Fit Types

XYZ	Destination specified as upper-left corner point and a zoom factor.
Fit	Fits the page into the window, corresponding to the Acrobat viewer's "FitPage" menu item.
FitH	Fits the widths of the page into the window, corresponding to the Acrobat viewer's "Fit Width" menu item.
FitV	Fits the height of the page into a window.
FitR	Fits the rectangle specified by its upper-left and lower-right corner points into the window.
FitB	Fits the rectangle containing all visible elements on the page (known as the bounding box) into the window, corresponds to the Acrobat viewer's "Fit Visible" menu item.
FitBH	Fits the width of the bounding box into the window.
FitBV	Fits the height of the bounding box into the window.

Notifications

AVAppDidInitialize

```
ACCB1 void ACCB2 AVAppDidInitialize (void* clientData);
```

Description

The Acrobat viewer has finished initializing and is about to enter its event loop.

Parameters

clientData	Pointer to a block of user-supplied data that was passed when the plug-in registered for this notification using **AVAppRegisterNotification**.

Related Notifications

AVAppWillQuit

Methods

None

AVAppFrontDocDidChange

```
ACCB1 void ACCB2 AVAppFrontDocDidChange (AVDoc doc,
void* clientData);
```

Description

The front-most **AVDoc** has changed.

NOTE: This notification is not broadcast for external windows, such as OLE applications or PDF files being displayed in Netscape.

Parameters

doc	The document that was brought to the front. **NULL** if there is no front-most document (for example, the previous front-most document was just closed).
clientData	Pointer to a block of user-supplied data that was passed when the plug-in registered for this notification using **AVAppRegisterNotification**.

Related Notifications

AVDocDidActivate
AVDocDidDeactivate

Methods

AVWindowBringToFront
AVDocOpenFromASFileWithParams
AVDocOpenFromFile
AVDocOpenFromFileWithParams
AVDocOpenFromPDDoc
AVDocOpenFromPDDocWithParams

AVAppOldPrefDidChange

```
ACCB1 void ACCB2 AVAppOldPrefDidChange
(AVPrefsType preference, void* clientData);
```

Description

An old-style **AVPrefsType** was changed.

Parameters

preference	Preference type that was changed. You can call **AVAppGetPreference** to find out the new value.
clientData	Pointer to a block of user-supplied data that was passed when the plug-in registered for this notification using **AVAppRegisterNotification**.

Related Notifications

AVAppPrefDidChange

Methods

AVAppSetPreference

AVAppPrefDidChange

```
ACCB1 void ACCB2 AVAppPrefDidChange (const char* section,
const char* key, void* clientData);
```

Description

A new-style preference changed.

NOTE: As of Acrobat 5.0, most of the methods used to set and get the new style preferences have not been exported to the public API.

Parameters

section	Section
key	Key
clientData	Pointer to a block of user-supplied data that was passed when the plug-in registered for this notification using **AVAppRegisterNotification**.

Related Notifications

AVAppOldPrefDidChange

Methods

Numerous

AVAppUsingPDDocForBatch

```
void AVAppUsingPDDocForBatch (AVBatchContext batchContext,
PDDoc pdDoc, ASBool isUsing, void* clientData);
```

Description

Used to let clients know when **pdDoc** is undergoing batch processing.

NOTE: This notification is set for *any* **pdDoc** that serves as input to batch processing, including **pdDoc**s that are attached to **AVDoc**s when batching is invoked on the currently open documents.

Parameters

batchContext	Placeholder. Reserved for future releases. Always **NULL**.
pdDoc	Document undergoing batch processing.
isUsing	When the document is about to be batch processed, the notification is sent with **isUsing** set to **true**. When batch processing has finished with the document, the notification is again sent but with **isUsing** set to **false**.
clientData	Pointer to a block of user-supplied data that was passed in by the calling application when this notification was registered for using **AVAppRegisterNotification**.

Related Notifications

None

Methods

Numerous

AVAppWillCloseAllInternalDocs

```
ACCB1 void ACCB2 AVAppWillCloseAllInternalDocs
(void* clientData);
```

Description

All **AVDoc**s will be closed.

Parameters

clientData	Pointer to a block of user-supplied data that was passed in by the calling application when this notification was registered for using **AVAppRegisterNotification**.

Related Notifications

AVDocDidClose
AVDocWillClose

Methods

None

AVAppWillQuit

```
ACCB1 void ACCB2 AVAppWillQuit (void* clientData);
```

Description

The Acrobat viewer is quitting. All documents have been closed. To access or enumerate documents when the application is quitting, replace the **AVAppCanQuit** method, access or enumerate documents in your replacement for that procedure, and return **true** to allow the Acrobat viewer to continue quitting.

Parameters

clientData	Pointer to a block of user-supplied data that was passed when the plug-in registered for this notification using **AVAppRegisterNotification**.

Related Notifications

AVAppDidInitialize

Methods

None

AVDocDidActivate

```
ACCB1 void ACCB2 AVDocDidActivate (AVDoc doc,
void* clientData);
```

Description

An **AVDoc** has activated. At the time this notification is broadcast, it is possible that the window being activated has not yet been brought to the front. For this reason, the **AVAppFrontDocDidChange** notification is often more useful.

NOTE: **AVAppGetActiveDoc** will not necessarily return the AVDoc returned in this notification. For instance, if there is an AVDoc in an external window (such as a Web browser's) that becomes active, the AVDoc returned by this notification won't match what **AVAppGetActiveDoc** returns.

NOTE: This notification is not broadcast for external windows, such as OLE applications or PDF files being displayed in Netscape.

Parameters

doc	The document that was activated.
clientData	Pointer to a block of user-supplied data that was passed when the plug-in registered for this notification using **AVAppRegisterNotification**.

Related Notifications

AVDocDidDeactivate
AVAppFrontDocDidChange

Methods

AVDocOpenFromASFileWithParams
AVDocOpenFromFile
AVDocOpenFromFileWithParams
AVDocOpenFromPDDoc
AVDocOpenFromPDDocWithParams

AVDocDidAddToSelection

```
ACCB1 void ACCB2 AVDocDidAddToSelection (AVDoc doc,
ASAtom selType, void *selData, void *addData,
void* clientData);
```

Description

The document's selection has been added to or had something removed.

Parameters

doc	The document containing the selection.
selType	The **ASAtom** corresponding to the current selection type. See **Selection Types** for a list of selection types.
selData	Pointer to the current selection data *after* the selection has been added. The format and contents of **selData** depend on **selType**.
addData	Pointer to the added selection data. The format and contents of **addData** depend on **selType**.
clientData	Pointer to a block of user-supplied data that was passed when the plug-in registered for this notification using **AVAppRegisterNotification**.

Related Notifications

AVDocDidSetSelection
AVDocDidRemoveFromSelection
AVDocWillClearSelection

Methods

AVDocClearSelection
AVDocDeleteSelection
AVDocSetSelection

AVDocDidClickName

```
ACCB1 void ACCB2 AVDocDidClickName (AVDoc doc, CosObj nameObj,
void* clientData);
```

Description

Acrobat executed an action to go to a named destination.

Parameters

doc	The document containing the named destination.
nameObj	The Cos object corresponding to the named destination.
clientData	Pointer to a block of user-supplied data that was passed when the plug-in registered for this notification using **AVAppRegisterNotification**.

Related Notifications

None

Methods

None

AVDocDidClose

```
ACCB1 void ACCB2 AVDocDidClose (AVDoc doc, void* clientData);
```

Description

A document has been closed. Although an **AVDoc** is passed to the routine called by this notification, the document has already been closed but not freed. As a result, all the routine can really do is manipulate any private data in the underlying PDF file at the time this notification occurs.

Parameters

doc	The document that was closed.
clientData	Pointer to a block of user-supplied data that was passed when the plug-in registered for this notification using **AVAppRegisterNotification**.

Related Notifications

AVDocWillClose

Methods

AVDocClose

AVDocDidDeactivate

```
ACCB1 void ACCB2 AVDocDidDeactivate (AVDoc doc,
void* clientData);
```

Description

A document was deactivated.

NOTE: This notification is not broadcast for external windows, such as OLE applications or PDF files being displayed in Netscape.

Parameters

doc	The document that was deactivated.
clientData	Pointer to a block of user-supplied data that was passed when the plug-in registered for this notification using **AVAppRegisterNotification**.

Related Notifications

AVDocDidActivate
AVAppFrontDocDidChange

Methods

AVDocOpenFromASFileWithParams
AVDocOpenFromFile
AVDocOpenFromFileWithParams
AVDocOpenFromPDDoc
AVDocOpenFromPDDocWithParams

AVDocDidDeleteSelection

```
ACCB1 void ACCB2 AVDocDidDeleteSelection (AVDoc doc, ASAtom
selType, void* selData, void* clientData);
```

Description

Called when a user deletes the current selection.

Parameters

doc	The document containing the selection.
selType	The selection's type. See **Selection Types** for a list of the those available.
selData	Server-dependent selection data.
clientData	Pointer to a block of user-supplied data that was passed when the plug-in registered for this notification using **AVAppRegisterNotification**.

Related Notifications

AVDocDidAddToSelection
AVDocDidSetSelection

Related Methods

AVDocDeleteSelection

AVDocDidOpen

```
ACCB1 void ACCB2 AVDocDidOpen (AVDoc doc, ASInt32 error,
void* clientData);
```

Description

A document has been opened.

Calling **AVDocClose** within this notification is forbidden.

Parameters

doc	The document that was opened.
error	Error code. **error** is set to **0** if no errors occurred while opening the file. If an error occurred, **error** contains the error code.
clientData	Pointer to a block of user-supplied data that was passed when the plug-in registered for this notification using **AVAppRegisterNotification**.

Related Notifications

AVDocWillOpenFromFile
AVDocWillOpenFromPDDoc

Methods

AVDocOpenFromASFileWithParams
AVDocOpenFromFile
AVDocOpenFromFileWithParams

AVDocDidPerformAction

```
ACCB1 void ACCB2 AVDocDidPerformAction (AVDoc doc,
PDAction action, ASInt32 err, void* clientData);
```

Description

An action was performed.

Parameters

doc	The document containing the action that was performed.
action	The action that was performed.
err	Error code. **error** is set to **0** if no errors occurred while performing the action. If an error occurred, **error** contains the error code.
clientData	Pointer to a block of user-supplied data that was passed when the plug-in registered for this notification using **AVAppRegisterNotification**.

Related Notifications

AVDocWillPerformAction

Methods

AVDocPerformAction

The following methods broadcast this notification if the document has an open action:

AVDocOpenFromASFileWithParams
AVDocOpenFromFile
AVDocOpenFromFileWithParams
AVDocOpenFromPDDoc
AVDocOpenFromPDDocWithParams

AVDocDidRemoveFromSelection

```
ACCB1 void ACCB2 AVDocDidRemoveFromSelection (AVDoc doc,
ASAtom selType, void* selData, void* remData,
void* clientData);
```

Description

The document's selection has had something removed.

Parameters

doc	The document whose selection was removed.
selType	The **ASAtom** corresponding to the current selection type. See **Selection Types** for a list of selection types.
selData	Pointer to the current selection data *after* the selection has been deleted. The format and contents of **selData** depend on **selType**..
remData	The item removed from the selection. The format and contents of **addData** depend on **selType**.
clientData	Pointer to a block of user-supplied data that was passed when the plug-in registered for this notification using **AVAppRegisterNotification**.

Related Notifications

AVDocDidSetSelection
AVDocDidAddToSelection
AVDocWillClearSelection

Methods

AVDocClearSelection
AVDocDeleteSelection
AVDocSetSelection

AVDocDidPrint

```
ACCB1 void ACCB2 AVDocDidPrint (AVDoc doc, void* clientData);
```

Description

This notification is broadcast after printing ends.

Parameters

doc	The document that was printed.
clientData	Pointer to a block of user-supplied data that was passed in by the calling application when this notification was registered for using **AVAppRegisterNotification**.

Related Notifications

AVDocWillPrint

Methods

AVDocPrintPages
AVDocPrintPagesWithParams

AVDocDidSetSelection

```
ACCB1 void ACCB2 AVDocDidSetSelection (AVDoc doc,
ASAtom selType, void *selData, void* clientData);
```

Description

The document's selection has been set.

Parameters

doc	The document whose selection was set.
selType	The **ASAtom** corresponding to the current selection type. See **Selection Types** for a list of selection types.
selData	Pointer to the current selection data. The format and contents of **selData** depend on **selType**.
clientData	Pointer to a block of user-supplied data that was passed when the plug-in registered for this notification using **AVAppRegisterNotification**.

Related Notifications

AVDocDidAddToSelection
AVDocWillClearSelection

Methods

AVDocClearSelection
AVDocDeleteSelection
AVDocSetSelection

AVDocWantsToDie

```
ACCB1 void ACCB2 AVDocWantsToDie (AVDoc doc,
void* clientData);
```

Description

An **AVDoc**'s file stream has been terminated by the **AVDocSetDead** method.

Parameters

doc	The **AVDoc** whose file stream has been terminated.
clientData	Pointer to a block of user-supplied data that was passed when the plug-in registered for this notification using **AVAppRegisterNotification**.

Related Notifications

AVDocDidClose

Methods

AVDocSetDead

AVDocWillClearSelection

```
ACCB1 void ACCB2 AVDocWillClearSelection (AVDoc doc,
ASAtom selType, void *selData, void* clientData);
```

Description

A document's selection is about to be cleared.

Parameters

doc	The document whose selection will be cleared.
selType	The **ASAtom** corresponding to the current selection type.
selData	Pointer to the current selection data. The format and contents of **selData** depend on **selType**.
clientData	Pointer to a block of user-supplied data that was passed when the plug-in registered for this notification using **AVAppRegisterNotification**.

Related Notifications

AVDocDidAddToSelection
AVDocDidSetSelection

Methods

AVDocClearSelection
AVDocDeleteSelection
AVDocSetSelection

AVDocWillClose

```
ACCB1 void ACCB2 AVDocWillClose (AVDoc doc, void* clientData);
```

Description

An **AVDoc** will be closed. Neither this notification nor **AVDocDidClose** are broadcast if the user selects “Cancel” when prompted to save a modified document as it is being closed.

NOTE: Reads made from **AVDocWillClose** on an in-browser document will fail if the data is not already downloaded.

Parameters

doc	The document that will be closed.
clientData	Pointer to a block of user-supplied data that was passed when the plug-in registered for this notification using **AVAppRegisterNotification**.

Related Notifications

AVDocDidClose

Methods

AVDocClose

AVDocWillOpenFromFile

```
ACCB1 void ACCB2 AVDocWillOpenFromFile (ASPathName fileName,
ASFileSys fileSys, void* clientData);
```

Description

An **AVDoc** will be opened from a file.

Parameters

fileName	The **ASPathName** for the file that will be opened.
fileSys	The file system responsible for the file to open.
clientData	Pointer to a block of user-supplied data that was passed when the plug-in registered for this notification using **AVAppRegisterNotification**.

Related Notifications

AVDocDidOpen

Methods

AVDocOpenFromASFileWithParams
AVDocOpenFromFile
AVDocOpenFromFileWithParams

AVDocWillOpenFromPDDoc

```
ACCB1 void ACCB2 AVDocWillOpenFromPDDoc (PDDoc pdDoc,
void* clientData);
```

Description

An **AVDoc** will be opened from a PDF file.

Parameters

pdDoc	The **PDDoc** for the file that will be opened.
clientData	Pointer to a block of user-supplied data that was passed when the plug-in registered for this notification using **AVAppRegisterNotification**.

Related Notifications

AVDocDidOpen

Methods

AVDocOpenFromPDDoc
AVDocOpenFromPDDocWithParams

AVDocWillPerformAction

```
ACCB1 void ACCB2 AVDocWillPerformAction (AVDoc doc,
PDAction action, void* clientData);
```

Description

An action is about to be performed.

Parameters

doc	The document containing the action that will be performed.
action	The action that will be performed.
clientData	Pointer to a block of user-supplied data that was passed when the plug-in registered for this notification using **AVAppRegisterNotification**.

Related Notifications

AVDocDidPerformAction

Methods

AVDocPerformAction

The following methods broadcast this notification if the document has an open action:

AVDocOpenFromASFileWithParams
AVDocOpenFromFile
AVDocOpenFromFileWithParams
AVDocOpenFromPDDoc
AVDocOpenFromPDDocWithParams

AVDocWillPrint

```
ACCB1 void ACCB2 AVDocWillPrint (AVDoc doc, void* clientData);
```

Description

This notification is broadcast before a document is printed, before any marks are made on the first page.

Parameters

doc	The document that is about to be printed.
clientData	Pointer to a block of user-supplied data that was passed in by the calling application when this notification was registered for using **AVAppRegisterNotification**.

Related Notifications

AVDocDidPrint

Methods

AVDocPrintPages
AVDocPrintPagesWithParams

AVPageViewAnnotDidPerformOp

```
ACCB1 void ACCB2 AVPageViewAnnotDidPerformOp
(AVPageView pageView, PDAnnot pdAnnot, AVAnnotOp annotOp,
void* clientData);
```

Description

Goes out when an annotation has performed a focus operation—e.g., **kAVAnnotAcceptFocus** or **kAVAnnotLostFocus**. No notification is issued for **kAVAnnotDefaultAction** or **kAVAnnotShowMenu**.

Parameters

pageView	The page view containing the annotation.
pdAnnot	The annotation that performed the operation.
annotOp	The operation.
clientData	Pointer to a block of user-supplied data that was passed when the plug-in registered for this notification using **AVAppRegisterNotification**.

Related Notifications

None

Methods

AVPageViewFocusAnnotPerformOp

AVPageViewDidChange

```
ACCB1 void ACCB2 AVPageViewDidChange (AVPageView pageView,
ASInt16 how, void* clientData);
```

Description

The page view has changed. Zero or more of the following events has occurred:

- The page number has changed.
- The zoom factor has changed.
- The window has been resized.
- The page has been scrolled.

NOTE: If continuous scrolling is turned on (available in Acrobat 3.0 or later) and more than one page is displayed in the **AVPageView**, alternating mouse clicks in the different pages displayed does not constitute a change to the **AVPageView**.

Parameters

pageView	The **AVPageView** that has changed.
how	Specifies how the page view did change. **how** is an OR of zero or more of the following (see **AVExpT.h**): **PAGEVIEW_UPDATE_SCROLL** — The view has been scrolled. **PAGEVIEW_UPDATE_PAGENUM** — The page number has changed. **PAGEVIEW_UPDATE_PAGESIZE** — A new view has been created. **PAGEVIEW_UPDATE_ZOOM** — The zoom has been changed.
clientData	Pointer to a block of user-supplied data that was passed when the plug-in registered for this notification using **AVAppRegisterNotification**.

Related Notifications

AVPageViewDidDraw

Methods

AVPageViewZoomTo
AVPageViewScrollTo
AVPageViewScrollToRect
AVPageViewGoTo
AVPageViewReadPageDown

AVPageViewReadPageUp
AVPageViewGoBack
AVPageViewGoForward
AVPageViewUseDestInfo
AVPageViewUseThisDestination

AVPageViewDidDraw

```
ACCB1 void ACCB2 AVPageViewDidDraw (AVPageView pageView,
void* clientData);
```

Description

Redrawing occurred in the page view section of the window.

Parameters

pageView	The **AVPageView** in which drawing occurred.
clientData	Pointer to a block of user-supplied data that was passed when the plug-in registered for this notification using **AVAppRegisterNotification**.

Related Notifications

AVPageViewDidChange
AVPageViewWillDraw

Methods

AVPageViewDrawNow

AVPageViewWillDraw

```
ACCB1 void ACCB2 AVPageViewWillDraw (AVPageView pageView,
void* clientData);
```

Description

Redrawing will occur in the page view section of the window.

Parameters

pageView	The **AVPageView** in which drawing will occur.
clientData	Pointer to a block of user-supplied data that was passed when the plug-in registered for this notification using **AVAppRegisterNotification**.

Related Notifications

AVPageViewDidChange
AVPageViewDidDraw

Methods

AVPageViewDrawNow

PagePDEContentDidChange

```
ACCB1 void ACCB2 PagePDEContentDidChange (PDPage page,
PDEContent pagesPDEContent);
```

Description

The **PDEContent** for a page has changed.

Parameters

page	The page whose **PDEContent** changed.
pagesPDEContent	The **PDEContent** that changed.

Related Notifications

PagePDEContentNotCached

Methods

PDPagePDEContentWasChanged

PagePDEContentNotCached

```
ACCB1 void ACCB2 PagePDEContentNotCached (PDPage page,
PDEContent pagesPDEContent);
```

Description

The **PDEContent** for a page is no longer valid.

This notification is also sent when others change (or delete) a **PDPage**'s contents without using PDFEdit methods. For instance, rotating or deleting a page in the viewer results in this notification being sent.

You should free up any tag data you might have attached to the **PDEContent**.

PDFEdit registers for almost a half dozen different notifications for the different ways Acrobat can alter page contents—you may need only this notification.

Parameters

page	The page whose **PDEContent** is no longer valid.
pagesPDEContent	The **PDEContent** that is no longer valid.

Related Notifications

PagePDEContentDidChange

Methods

PDDocDeletePages
PDPageAddCosContents
PDPageAddCosResource
PDPageRemoveCosContents
PDPageRemoveCosResource
PDPageSetRotate

PDAnnotDidChange

```
ACCB1 void ACCB2 PDAnnotDidChange (PDAnnot annot, ASAtom key,
ASInt32 error, void* clientData);
```

Description

An annotation changed in the specified way.

Parameters

annot	The annotation that changed.
key	The **ASAtom** specifying how the annotation changed. The **ASAtom** corresponding to the key that changed in the annotation's Cos dictionary. See Section 7.4 on annotations in the *PDF Reference* for information on the keys.
error	Error code. **error** is set to **0** if no errors occurred while changing the annotation. If an error occurred, **error** contains the error code.
clientData	Pointer to a block of user-supplied data that was passed when the plug-in registered for this notification using **AVAppRegisterNotification**.

Related Notifications

PDAnnotWillChange

Methods

PDAnnotNotifyDidChange
PDAnnotSetRect
PDTextAnnotSetOpen
PDAnnotSetColor
PDAnnotSetTitle
PDAnnotSetDate
PDAnnotSetFlags
PDTextAnnotSetContents
PDLinkAnnotSetBorder
PDLinkAnnotSetAction
AVPageViewSetAnnotLocation

PDAnnotWasCreated

```
ACCB1 void ACCB2 PDAnotWasCreated (PDAnnot annot,
PDPage page, void* clientData);
```

Description

An annotation was created.

Parameters

annot	The annotation that was created.
page	The page to which the annotation was added.
clientData	Pointer to a block of user-supplied data that was passed when the plug-in registered for this notification using **AVAppRegisterNotification**.

Related Notifications

PDAnnotDidChange
PDAnnotWillChange

Methods

PDPageCreateAnnot
PDPageAddNewAnnot

PDAnnotWillChange

```
ACCB1 void ACCB2 PDAnnotWillChange (PDAnnot annot, ASAtom key,
void* clientData);
```

Description

An annotation will change in the specified way.

Parameters

annot	The annotation that will change.
key	The **ASAtom** specifying how the annotation will change. The **ASAtom** corresponding to the key that changed in the annotation's Cos dictionary. See Section 7.4 on annotations in the *PDF Reference* for information on the keys.
clientData	Pointer to a block of user-supplied data that was passed when the plug-in registered for this notification using **AVAppRegisterNotification**.

Related Notifications

PDAnnotDidChange

Methods

PDAnnotNotifyWillChange
PDAnnotSetRect
PDTextAnnotSetOpen
PDAnnotSetColor
PDAnnotSetTitle
PDAnnotSetDate
PDAnnotSetFlags
PDTextAnnotSetContents
PDLinkAnnotSetBorder
PDLinkAnnotSetAction
AVPageViewSetAnnotLocation

PDBookmarkDidChange

```
ACCB1 void ACCB2 PDBookmarkDidChange (PDBookmark bookmark,
ASAtom key, ASInt32 err, void* clientData);
```

Description

A bookmark has been opened/closed, its action has been changed, its title has been changed, or children have been added to it.

Parameters

bookmark	The bookmark that will be changed.
key	The **ASAtom** specifying the change that will occur. See **PDBookmarkWillChange** for a list of the **ASAtoms** and their meaning.
err	Error code. **error** is set to **0** if no errors occurred while changing the bookmark. If an error occurred, **error** contains the error code.
clientData	Pointer to a block of user-supplied data that was passed when the plug-in registered for this notification using **AVAppRegisterNotification**.

Related Notifications

PDBookmarkWillChange
PDBookmarkDidChangePosition

Methods

PDBookmarkSetOpen
PDBookmarkSetAction
PDBookmarkSetTitle
PDBookmarkAddSubtree

PDBookmarkDidChangePosition

```
ACCB1 void ACCB2 PDBookmarkDidChangePosition
(PDBookmark bookmark, void* clientData);
```

Description

One or more bookmarks have been moved.

Parameters

bookmark	The bookmark that was moved.
clientData	Pointer to a block of user-supplied data that was passed when the plug-in registered for this notification using **AVAppRegisterNotification**.

Related Notifications

PDBookmarkWillChange
PDBookmarkDidChange

Methods

PDBookmarkAddNext
PDBookmarkAddPrev
PDBookmarkAddNewChild
PDBookmarkAddNewSibling
PDBookmarkAddChild
PDBookmarkAddSubtree

PDBookmarkDidDestroy

```
ACCB1 void ACCB2 PDBookmarkDidDestroy (PDBookmark bookmark,
ASInt32 err, void* clientData);
```

Description

A bookmark was destroyed.

Parameters

bookmark	The bookmark that was destroyed. Because the bookmark has been destroyed, it is not possible to access it.
err	Error code. **error** is set to **0** if no errors occurred while destroying the bookmark. If an error occurred, **error** contains the error code.
clientData	Pointer to a block of user-supplied data that was passed when the plug-in registered for this notification using **AVAppRegisterNotification**.

Related Notifications

PDBookmarkWillDestroy

Methods

PDBookmarkDestroy

PDBookmarkDidUnlink

```
ACCB1 void ACCB2 PDBookmarkDidUnlink (PDBookmark bookmark,
void* clientData);
```

Description

A bookmark was unlinked from the bookmark tree.

Parameters

bookmark	The bookmark that was unlinked. Because the bookmark has not been destroyed, it is possible to access it.
clientData	Pointer to a block of user-supplied data that was passed when the plug-in registered for this notification using **AVAppRegisterNotification**.

Related Notifications

PDBookmarkDidChangePosition

Methods

PDBookmarkUnlink

PDBookmarkWasCreated

```
ACCB1 void ACCB2 PDBookmarkWasCreated (PDBookmark bookmark,
void* clientData);
```

Description

A bookmark was created.

Parameters

bookmark	The bookmark that was created.
clientData	Pointer to a block of user-supplied data that was passed when the plug-in registered for this notification using **AVAppRegisterNotification**.

Related Notifications

PDBookmarkDidDestroy
PDBookmarkWillDestroy

Methods

PDBookmarkAddNewChild
PDBookmarkAddNewSibling

PDBookmarkWillChange

```
ACCB1 void ACCB2 PDBookmarkWillChange (PDBookmark bookmark,
ASAtom key, void* clientData);
```

Description

A bookmark will be opened/closed, its action will be changed, its title will be changed, or children will be added to it.

Parameters

bookmark	The bookmark that will be changed.
key	The **ASAtom** specifying the change that will occur. **key** will be an **ASAtom** corresponding to one of the following: • **Count** — Children will be added, or bookmark will be opened/closed. • **A** — Action will be changed. • **Title** — Title will be changed.
clientData	Pointer to a block of user-supplied data that was passed when the plug-in registered for this notification using **AVAppRegisterNotification**.

Related Notifications

PDBookmarkDidChange
PDBookmarkDidChangePosition

Methods

PDBookmarkSetOpen
PDBookmarkSetAction
PDBookmarkSetTitle
PDBookmarkAddSubtree

PDBookmarkWillDestroy

```
ACCB1 void ACCB2 PDBookmarkWillDestroy (PDBookmark bookmark,
void* clientData);
```

Description

A bookmark will be destroyed.

Parameters

bookmark	The bookmark that will be destroyed.
clientData	Pointer to a block of user-supplied data that was passed when the plug-in registered for this notification using **AVAppRegisterNotification**.

Related Notifications

PDBookmarkDidDestroy

Methods

PDBookmarkDestroy

PDDocCalculateMetadata

```
ACCB1 void ACCB2 PDDocCalculateMetadata (PDDoc pdDoc,
void* clientData);
```

Description

The plug-in is requested to calculate and set metadata items that depend on the state of the document. Issued when a document is saved. Can also be issued explicitly via **PDDocCalculateImplicitMetadata**.

Parameters

pdDoc	The document for which implicit metadata is to be calculated.
clientData	Pointer to a block of user-supplied data that was passed when the plug-in registered for this notification using **AVAppRegisterNotification**.

Related Notifications

None

Methods

Numerous, but especially **PDDocCalculateImplicitMetadata**

PDDocDidAddThread

```
ACCB1 void ACCB2 PDDocDidAddThread (PDDoc doc,
PDThread thread, void* clientData);
```

Description

A thread has been added to a document.

Parameters

doc	The document to which a thread was added.
thread	The thread that was added.
clientData	Pointer to a block of user-supplied data that was passed when the plug-in registered for this notification using **AVAppRegisterNotification**.

Related Notifications

PDThreadDidChange

Methods

PDDocAddThread
PDDocInsertPages

PDDocDidChangePageAreas

```
ACCB1 void ACCB2 PDDocDidChangePageAreas (PDDoc pdDoc,
ASInt32 areaMask, ASInt32 firstPage, ASInt32 lastPage,
void* clientData);
```

Description

Page areas changed.

Parameters

pdDoc	The document in which the page areas changed.
areaMask	Area mask.
firstPage	First page.
lastPage	Last page.
clientData	Pointer to a block of user-supplied data that was passed when the plug-in registered for this notification using **AVAppRegisterNotification**.

Related Notifications

PDDocDidChangePages

Methods

Numerous

PDDocDidChangePages

```
ACCB1 void ACCB2 PDDocDidChangePages (PDDoc doc,
PDOperation op, ASInt32 fromPage, ASInt32 toPage,
ASInt32 error, void* clientData);
```

Description

Pages have been inserted, deleted, moved, or modified.

Parameters

doc	The document in which pages have been changed.
op	The change that was made. **op** will be one of the **PDOperation** values.
fromPage	The page number of the first page that was modified. For page insertion, this is the number of the page *before* the first inserted page. For page deletion, this is the page number of the first deleted page.
toPage	The page number of the last page that was modified. If broadcast by **PDDocCreatePage**, this is the number of the newly-created page. When broadcast by **PDDocInsertPages**, **toPage** is the number of pages in the document post-insertion; that is, it points to a page not in the document. If broadcast by **PDDocDeletePages**, **toPage** is the number of pages in the **PDDoc** prior to deletion, pointing to a page not in the document.
error	Error code. **error** is set to **0** if no errors occurred while changing the pages. If an error occurred, **error** contains the error code.
clientData	Pointer to a block of user-supplied data that was passed when the plug-in registered for this notification using **AVAppRegisterNotification**.

Related Notifications

PDDocWillChangePages

Methods

PDDocCreatePage
PDDocInsertPages
PDDocReplacePages
PDDocMovePage
PDPageAddCosResource

PDPageRemoveCosResource
PDPageAddCosContents
PDPageRemoveCosContents
PDDocDeletePages
PDPageSetRotate
PDPageSetMediaBox
PDPageSetCropBox

PDDocDidChangeThumbs

```
ACCB1 void ACCB2 PDDocDidChangeThumbs (PDDoc doc,
void* clientData);
```

Description

Thumbnail images have been added or removed. In addition to the expected ways in which this can occur, it can also occur if pages are inserted into a file.

Parameters

doc	The document in which thumbnail images have been changed.
clientData	Pointer to a block of user-supplied data that was passed when the plug-in registered for this notification using **AVAppRegisterNotification**.

Related Notifications

PDDocDidChangePages
PDDocDidDeletePages
PDDocDidInsertPages
PDDocDidReplacePages
PDDocWillChangePages
PDDocWillDeletePages
PDDocWillInsertPages
PDDocWillReplacePages

Methods

PDDocCreatePage
PDDocCreateThumbs
PDDocDeleteThumbs
PDDocInsertPages

PDDocDidClose

```
ACCB1 void ACCB2 PDDocDidClose (PDDoc doc, void* clientData);
```

Description

A **PDDoc** closed. A **PDDoc** is closed only if its reference count is zero.

Neither this notification, **PDDocWillClose**, **AVDocWillClose**, nor **AVDocDidClose** are broadcast if the user selects **Cancel** when prompted to save a modified document as it is being closed.

Parameters

doc	The document that closed.
clientData	Pointer to a block of user-supplied data that was passed in by the calling application when this notification was registered for using **AVAppRegisterNotification**.

Related Notifications

PDDocWillClose

Methods

AVDocClose
PDDocClose

PDDocDidDeletePages

```
ACCB1 void ACCB2 PDDocDidDeletePages (PDDoc doc,
ASInt32 fromPage, ASInt32 toPage, ASInt32 error,
void* clientData);
```

Description

One or more pages were deleted.

Parameters

doc	The document from which pages were deleted.
fromPage	The page number of the first page that was deleted.
toPage	The page number of the last page that was deleted.
error	Error code. **error** is set to **0** if no errors occurred while deleting the pages. If an error occurred, **error** contains the error code.
clientData	Pointer to a block of user-supplied data that was passed when the plug-in registered for this notification using **AVAppRegisterNotification**.

Related Notifications

PDDocWillDeletePages
PDDocDidChangePages

Methods

PDDocDeletePages

PDDocDidExportAnnots

```
ACCB1 void ACCB2 PDDocDidExportAnnots (PDDoc doc,
void* clientData);
```

Description

The annotations of a document were exported.

Parameters

doc	The document whose annotations were exported.
clientData	Pointer to a block of user-supplied data that was passed in by the calling application when this notification was registered for using **AVAppRegisterNotification**.

Related Notifications

PDDocDidImportAnnots
PDDocWillExportAnnots
PDDocWillImportAnnots

Methods

PDDocExportNotes

PDDocDidImportAnnots

```
ACCB1 void ACCB2 PDDocDidImportAnnots (PDDoc doc,
void* clientData);
```

Description

The annotations from one document were imported into another document.

Parameters

doc	The document into which annotations were imported.
clientData	Pointer to a block of user-supplied data that was passed in by the calling application when this notification was registered for using **AVAppRegisterNotification**.

Related Notifications

PDDocDidImportAnnots
PDDocWillExportAnnots
PDDocWillImportAnnots

Methods

PDDocImportCosDocNotes
PDDocImportNotes

PDDocDidInsertPages

```
ACCB1 void ACCB2 PDDocDidInsertPages (PDDoc doc,
ASInt32 insertAfterThisPage, PDDoc srcDoc,
ASInt32 srcFromPage, ASInt32 srcToPage, ASInt32 error,
void* clientData);
```

Description

One or more pages have been inserted.

Parameters

doc	The document into which pages were inserted.
insertAfterThisPage	Page number (in **doc**) after which pages were inserted.
srcDoc	The document that provided the pages that were inserted. This is **NULL** when a new blank page is created and inserted into a document. This is **NULL** for a notification broadcast by **PDDocCreatePage**.
srcFromPage	The page number (in **srcDoc**) of the first page that was inserted. Not valid when a new blank page is created and inserted into a document. This is **NULL** for a notification broadcast by **PDDocCreatePage**.
srcToPage	The page number (in **srcDoc**) of the last page that was inserted. Not valid when a new blank page is created and inserted into a document. This is **NULL** for a notification broadcast by **PDDocCreatePage**.
error	Error code. **error** is set to **0** if no errors occurred while inserting the pages. If an error occurred, **error** contains the error code.
clientData	Pointer to a block of user-supplied data that was passed when the plug-in registered for this notification using **AVAppRegisterNotification**.

Related Notifications

PDDocWillInsertPages
PDDocDidChangePages

Methods

PDDocCreatePage
PDDocInsertPages

PDDocDidInsertPagesEx

```
ACCB1 void ACCB2 PDDocDidInsertPagesEx
(PDDocInsertPagesParams params, void* clientData);
```

Description

Pages were inserted into a document. This notification occurs after the **PDDocDidInsertPages** notification.

Parameters

params	A structure describing how pages were inserted.
clientData	Pointer to a block of user-supplied data that was passed in by the calling application when this notification was registered for using **AVAppRegisterNotification**.

Related Notifications

PDDocDidInsertPages
PDDocWillInsertPages
PDDocWillInsertPagesEx

Methods

PDDocCreatePage
PDDocInsertPages

PDDocDidMovePages

```
ACCB1 void ACCB2 PDDocDidMovePages (PDDoc doc,
ASInt32 moveAfterThisPage, ASInt32 fromPage, ASInt32 toPage,
ASInt32 error, void* clientData);
```

Description

One or more pages were moved.

Parameters

doc	The document in which pages were moved.
moveAfterThisPage	The page number after which the moved pages were placed.
fromPage	The page number of the first page that was moved.
toPage	The page number of the last page that was moved.
error	Error code. **error** is set to **0** if no errors occurred while moving pages. If an error occurred, **error** contains the error code.
clientData	Pointer to a block of user-supplied data that was passed when the plug-in registered for this notification using **AVAppRegisterNotification**.

Related Notifications

PDDocWillMovePages
PDDocDidChangePages

Methods

PDDocMovePage

PDDocDidOpen

```
ACCB1 void ACCB2 PDDocDidOpen (PDDoc doc, void* clientData);
```

Description

A document was opened.

Parameters

doc	The document.
clientData	Pointer to a block of user-supplied data that was passed when the plug-in registered for this notification using **AVAppRegisterNotification**.

Related Notifications

None

Methods

Numerous

PDDocDidPrintPage

```
ACCB1 void ACCB2 PDDocDidPrintPage (PDDoc doc, ASInt32 page,
ASStm stm, ASInt32 error, void* clientData);
```

Description

This notification is broadcast once per page that is printed, after all marks have been made on the page. When printing to a PostScript printer, printing commands can also be sent that will be placed on the page after all other marks.

Parameters

doc	The document from which a page was printed.
page	The page number of the page that was printed.
stm	The PostScript print stream when printing to a PostScript printer, and **NULL** when printing to a non-PostScript printer. When printing to a PostScript printer, plug-ins can write printing commands into **stm** (using **ASStmWrite**) to add marks to the printed page after all other marks have been made. See **PDDocWillPrintPage** for a description of the sequence of operations when printing a page to a PostScript printer.
error	Error code. **error** is set to **0** if no errors occurred while printing the page. If an error occurred, **error** contains the error code.
clientData	Pointer to a block of user-supplied data that was passed when the plug-in registered for this notification using **AVAppRegisterNotification**.

Related Notifications

PDDocWillPrintPage
PDDocDidPrintPages

Methods

AVDocPrintPages
AVDocPrintPagesWithParams

PDDocDidPrintPages

```
ACCB1 void ACCB2 PDDocDidPrintPages (PDDoc doc,
ASInt32 fromPage, ASInt32 toPage, ASInt32 error,
void* clientData);
```

Description

This notification is broadcast after printing ends.

Parameters

doc	The document from which pages were printed.
fromPage	The page number of the first page that was printed.
toPage	The page number of the last page that was printed.
error	Error code. **error** is set to **0** if no errors occurred while printing the pages. If an error occurred, **error** contains the error code.
clientData	Pointer to a block of user-supplied data that was passed when the plug-in registered for this notification using **AVAppRegisterNotification**.

Related Notifications

PDDocWillPrintPages
PDDocDidPrintPage

Methods

AVDocPrintPages
AVDocPrintPagesWithParams

PDDocDidPrintTiledPage

```
ACCB1 void ACCB2 PDDocDidPrintTiledPage (PDDoc doc,
ASInt32 page, ASStm stm, ASInt32 error, ASInt32 whichSheet,
ASInt32 totalSheets, void* clientData);
```

Description

Clients who register for **PDDocDidPrintTiledPage** will be called after the tile marks (if any) have been emitted for this tiled page. Tiled pages can be requested by the user from the Advanced print dialog; plug-ins are made aware of the selection via the tiled page notifications.

Parameters

doc	The document containing the tiled page.
page	The page being printed.
stm	The PostScript print stream when printing to a PostScript printer, and **NULL** when printing to a non-PostScript printer. When printing to a PostScript printer, plug-ins can write printing commands into **stm** (using **ASStmWrite**) to add marks to pages before any other marks have been made.
error	Error code. **error** is set to **0** if no errors occurred while printing the pages. If an error occurred, **error** contains the error code.
whichSheet	The sheet to be printed.
totalSheets	The number of sheets to be printed.
clientData	Pointer to a block of user-supplied data that was passed when the plug-in registered for this notification using **AVAppRegisterNotification**.

Related Notifications

PDDocPrintingTiledPage
PDDocWillPrintTiledPage

Methods

AVDocPrintPages
AVDocPrintPagesWithParams

PDDocDidRemoveThread

```
ACCB1 void ACCB2 PDDocDidRemoveThread (PDDoc doc,
ASInt32 index, void* clientData);
```

Description

A thread was removed from a document.

Parameters

doc	The document from which a thread was removed.
index	The index of the thread that was removed. Because the thread has already been removed, it is not possible to access it using **index**.
clientData	Pointer to a block of user-supplied data that was passed when the plug-in registered for this notification using **AVAppRegisterNotification**.

Related Notifications

PDDocWillRemoveThread

Methods

PDDocRemoveThread

PDDocDidReplacePages

```
ACCB1 void ACCB2 PDDocDidReplacePages (PDDoc doc,
ASInt32 fromPage, ASInt32 toPage, PDDoc srcDoc,
ASInt32 srcFromPage, ASInt32 srcToPage, ASInt32 error,
void* clientData);
```

Description

One or more pages have been replaced.

Parameters

doc	The document in which pages have been replaced.
fromPage	The page number (in **doc**) of the first page that was replaced.
toPage	The page number (in **doc**) of the last page that was replaced.
srcDoc	The document that provided the replacement pages.
srcFomPage	The page number (in **srcDoc**) of the first replacement page.
srcToPage	The page number (in **srcDoc**) of the last replacement page.
error	Error code. **error** is set to **0** if no errors occurred while replacing pages. If an error occurred, **error** contains the error code.
clientData	Pointer to a block of user-supplied data that was passed when the plug-in registered for this notification using **AVAppRegisterNotification**.

Related Notifications

PDDocWillReplacePages
PDDocDidChangePages

Methods

PDDocReplacePages

PDDocDidSave

```
ACCB1 void ACCB2 PDDocDidSave (PDDoc doc, ASInt32 err,
void* clientData);
```

Description

A document has been saved.

The **PDDocDidSave** notification takes place just after the save operation finishes. At the time of a **PDDocDidSave** notification, a plug-in or application can reacquire resources from the **PDDoc** if needed. It should examine the error code **err** associated with the save. If the save was not successful, the error code is non-zero. In the case of a unsuccessful save, a plug-in or application should *not* attempt to do anything further with this **PDDoc**.

See **PDDocWillSaveEx** for important information on releasing objects derived from the **PDDoc** before it is saved.

Parameters

doc	The document that was saved.
err	Error code. **error** is set to **0** if no errors occurred while saving the file. If an error occurred, **error** contains the error code.
clientData	Pointer to a block of user-supplied data that was passed when the plug-in registered for this notification using **AVAppRegisterNotification**.

Related Notifications

PDDocWillSave

PDDocWillSaveEx

Methods

PDDocSave

PDDocPageLabelDidChange

```
ACCB1 void ACCB2 PDDocPageLabelDidChange (PDDoc doc,
ASInt32 firstPage, ASInt32 lastPage, void* clientData);
```

Description

A range of pages' labels changed in a **PDDoc**.

Parameters

doc	The document containing the pages whose labels changed.
firstPage	The number of the first page whose label changed.
lastPage	The number of the last page whose label changed.
clientData	Pointer to a block of user-supplied data that was passed in by the calling application when this notification was registered for using **AVAppRegisterNotification**.

Related Notifications

None

Methods

PDDocSetPageLabel

PDDocPrintingTiledPage

```
ACCB1 void ACCB2 PDDocPrintingTiledPage (PDDoc doc,
ASInt32 page, ASStm stm, ASInt32 whichRow,
ASInt32 whichColumn, ASInt32 numRows, ASInt32 numColumns,
ASFixedRect* cropRegion, PDTile tile, void* clientData);
```

Description

Clients who register for **PDDocPrintingTilePage** will be called just after the page contents have been emitted for this tile. Tiled pages can be requested by the user from the Advanced print dialog; plug-ins are made aware of the selection via the tiled page notifications.

Parameters

doc	The document containing the tiled page.
pageNum	The page being printed.
stm	The PostScript print stream when printing to a PostScript printer, and **NULL** when printing to a non-PostScript printer. When printing to a PostScript printer, plug-ins can write printing commands into **stm** (using **ASStmWrite**) to add marks to pages before any other marks have been made.
whichRow	The row that is being printed.
whichColumn	The column that is being printed.
numRows	The number of rows to be printed.
numColumns	The number of columns to be printed.
cropRegion	A pointer to an **ASFixedRect** that represents the region of the **PDPage** being “cropped to” for this sheet.
tile	The **PDTile** currently in use. The fields in this structure can be modified as necessary to affect tiling output.
clientData	Pointer to a block of user-supplied data that was passed when the plug-in registered for this notification using **AVAppRegisterNotification**.

Related Notifications

PDDocDidPrintTiledPage
PDDocWillPrintTiledPage

Methods

AVDocPrintPages
AVDocPrintPagesWithParams

PDDocWillChangePages

```
ACCB1 void ACCB2 PDDocWillChangePages (PDDoc doc,
PDOperation op, ASInt32 fromPage, ASInt32 toPage,
void* clientData);
```

Description

Pages will be inserted, deleted, moved, or modified.

Parameters

doc	The document in which pages will be changed.
op	The change that will be made. **op** will be one of the **PDOperation** values.
fromPage	The page number of the first page that will be modified.
toPage	The page number of the last page that will be modified.
clientData	Pointer to a block of user-supplied data that was passed when the plug-in registered for this notification using **AVAppRegisterNotification**.

Related Notifications

PDDocDidChangePages

Methods

PDDocDeletePages
PDPageSetRotate
PDPageSetMediaBox
PDPageSetCropBox

PDDocWillClose

```
ACCB1 void ACCB2 PDDocWillClose (PDDoc doc, void* clientData);
```

Description

A **PDDoc** will be closed. A **PDDoc** is closed only if its reference count is zero.

Neither this notification, **PDDocDidClose**, **AVDocWillClose,** nor **AVDocDidClose** are broadcast if the user selects “Cancel” when prompted to save a modified document as it is being closed.

Parameters

doc	The document to close.
clientData	Pointer to a block of user-supplied data that was passed in by the calling application when this notification was registered for using **AVAppRegisterNotification**.

Related Notifications

PDDocDidClose

Methods

AVDocClose
PDDocClose

PDDocWillDeletePages

```
ACCB1 void ACCB2 PDDocWillDeletePages (PDDoc doc,
ASInt32 fromPage, ASInt32 toPage, void* clientData);
```

Description

One or more pages will be deleted.

Parameters

doc	The document from which pages will be deleted.
fromPage	The page number of the first page that will be deleted.
toPage	The page number of the last page that will be deleted.
clientData	Pointer to a block of user-supplied data that was passed when the plug-in registered for this notification using **AVAppRegisterNotification**.

Related Notifications

PDDocDidDeletePages
PDDocDidChangePages

Methods

PDDocDeletePages

PDDocWillExportAnnots

```
ACCB1 void ACCB2 PDDocWillExportAnnots (PDDoc doc,
void* clientData);
```

Description

The annotations of a document will be exported.

Parameters

doc	The document whose annotations will be exported.
clientData	Pointer to a block of user-supplied data that was passed in by the calling application when this notification was registered for using **AVAppRegisterNotification**.

Related Notifications

PDDocDidExportAnnots
PDDocDidImportAnnots
PDDocWillImportAnnots

Methods

PDDocExportNotes

PDDocWillImportAnnots

```
ACCB1 void ACCB2 PDDocWillImportAnnots (PDDoc doc,
void* clientData);
```

Description

The annotations from one document will be imported into another document.

Parameters

doc	The document into which annotations will be imported.
clientData	Pointer to a block of user-supplied data that was passed in by the calling application when this notification was registered for using **AVAppRegisterNotification**.

Related Notifications

PDDocDidExportAnnots
PDDocDidImportAnnots
PDDocWillImportAnnots

Methods

PDDocImportCosDocNotes
PDDocImportNotes

PDDocWillInsertPages

```
ACCB1 void ACCB2 PDDocWillInsertPages (PDDoc doc,
ASInt32 insertAfterThisPage, PDDoc srcDoc,
ASInt32 srcFromPage, ASInt32 srcToPage, void* clientData);
```

Description

One or more pages will be inserted.

Parameters

doc	The document into which pages will be inserted.
insertAfterThisPage	Page number (in **doc**) after which pages will be inserted.
srcDoc	The document that provides the pages to insert. This is **NULL** when a new blank page is created and inserted into a document. This is **NULL** for a notification broadcast by **PDDocCreatePage**.
srcFromPage	The page number (in **srcDoc**) of the first page that will be inserted. Not valid when a new blank page is created and inserted into a document. This is **NULL** for a notification broadcast by **PDDocCreatePage**.
srcToPage	The page number (in **srcDoc**) of the last page that will be inserted. Not valid when a new blank page is created and inserted into a document. This is **NULL** for a notification broadcast by **PDDocCreatePage**.
clientData	Pointer to a block of user-supplied data that was passed when the plug-in registered for this notification using **AVAppRegisterNotification**.

Related Notifications

PDDocDidInsertPages
PDDocWillChangePages

Methods

PDDocCreatePage
PDDocInsertPages

PDDocWillInsertPagesEx

```
ACCB1 void ACCB2 PDDocWillInsertPagesEx
(PDDocInsertPagesParams params, void* clientData);
```

Description

Pages will be inserted into a document. This notification occurs after the **PDDocWillInsertPages** notification.

Parameters

params	A structure describing how pages will be inserted.
clientData	Pointer to a block of user-supplied data that was passed in by the calling application when this notification was registered for using **AVAppRegisterNotification**.

Related Notifications

PDDocDidInsertPages
PDDocDidInsertPagesEx
PDDocWillInsertPages

Methods

PDDocCreatePage
PDDocInsertPages

PDDocWillMovePages

```
ACCB1 void ACCB2 PDDocWillMovePages (PDDoc doc,
ASInt32 moveAfterThisPage, ASInt32 fromPage, ASInt32 toPage,
void* clientData);
```

Description

One or more pages will be moved.

Parameters

doc	The document in which pages will be moved.
moveAfterThisPage	The page number after which the moved pages will be placed.
fromPage	The page number of the first page to move.
toPage	The page number of the last page to move.
clientData	Pointer to a block of user-supplied data that was passed when the plug-in registered for this notification using **AVAppRegisterNotification**.

Related Notifications

PDDocDidMovePages
PDDocWillChangePages

Methods

PDDocMovePage

PDDocWillPrintDoc

```
ACCB1 void ACCB2 PDDocWillPrintDoc (PDDoc doc, ASStm stm,
ASInt32 psLevel, void* clientData);
```

Description

This notification is broadcast before a document is printed, before any marks are made on the first page. When printing to a PostScript printer, printing commands can also be sent that are placed on the page before any other marks. For example, a **setpagedevice** operator could be placed in the print stream.

NOTE: Page resources and contents cannot be modified reliably at the time this notification is broadcast.

Parameters

doc	The document that is about to be printed.
stm	The PostScript print stream when printing to a PostScript printer, and **NULL** when printing to a non-PostScript printer. When printing to a PostScript printer, plug-ins can write printing commands into **stm** (using **ASStmWrite**) to add marks to pages before any other marks have been made. In the 2.x Acrobat viewers, the page printing sequence to a PostScript printer is: *page setup (including* **setpagedevice***)*…**save**… **gsave**…**save**…**begin**… **begin**…**begin**… **PDDocWillPrintPage**… *page contents*… **PDDocDidPrintPage**… **end**… **end**… **end**… **restore**… **restore**… **showpage**. This sequence must not be relied on, and it is to some extent dependent on the printer driver in use. Nevertheless, it is true that by the time the **PDDocWillPrintPage** notification is broadcast, it is too late to perform any **setpagedevice** operations.
psLevel	When printing to a PostScript printer, **psLevel** is either 1 or 2, representing the PostScript level available on the printer. When printing to a non-PostScript printer, **psLevel** is 0. **psLevel** is useful to determine whether or not the output device is a PostScript printer. In addition, when printing to a PostScript printer, **psLevel** is useful to determine the operators that can be sent in any printing code downloaded using the **PDDocWillPrintDoc**, **PDDocWillPrintPage**, and **PDDocDidPrintPage** notifications.

clientData	Pointer to a block of user-supplied data that was passed when the plug-in registered for this notification using **AVAppRegisterNotification**.

Related Notifications

PDDocDidPrintPage
PDDocWillPrintPages

Methods

AVDocPrintPages
AVDocPrintPagesWithParams

PDDocWillPrintPage

```
ACCB1 void ACCB2 PDDocWillPrintPage (PDDoc doc, ASInt32 page,
ASStm stm, void* clientData);
```

Description

This notification is broadcast once per page that is printed, before any marks are made on the page. When printing to a PostScript printer, printing commands can also be sent that will be placed on the page before any other marks.

NOTE: Page resources and contents cannot be modified reliably at the time this notification is broadcast.

Parameters

doc	The document from which a page is about to be printed.
page	The page number of the page that is about to be printed.
stm	The PostScript print stream when printing to a PostScript printer, and **NULL** when printing to a non-PostScript printer. When printing to a PostScript printer, plug-ins can write printing commands into **stm** (using **ASStmWrite**) to add marks to the printed page before any other marks have been made. In the 2.x Acrobat viewers, the page printing sequence to a PostScript printer is: *page setup (including* **setpagedevice***)*…**save**… **gsave**…**save**…**begin**… **begin**…**begin**… **PDDocWillPrintPage**… *page contents*… **PDDocDidPrintPage**… **end**… **end**… **end**… **restore**… **restore**… **showpage**. This sequence must not be relied on, and it is to some extent dependent on the printer driver in use. Nevertheless, it is true that by the time the **PDDocWillPrintPage** notification is broadcast, it is too late to perform any **setpagedevice** operations.
clientData	Pointer to a block of user-supplied data that was passed when the plug-in registered for this notification using **AVAppRegisterNotification**.

Related Notifications

PDDocDidPrintPage
PDDocWillPrintPages

Methods

AVDocPrintPages
AVDocPrintPagesWithParams

PDDocWillPrintPages

```
ACCB1 void ACCB2 PDDocWillPrintPages (PDDoc doc,
ASInt32 fromPage, ASInt32 toPage, ASInt32 psLevel,
ASBool binaryOK, void* clientData);
```

Description

This notification is broadcast when printing begins, before any pages are printed.

NOTE: Page resources and contents cannot be modified reliably at the time this notification is broadcast.

Parameters

doc	The document from which pages will be printed.
fromPage	The page number of the first page that will be printed.
toPage	The page number of the last page that will be printed.
psLevel	When printing to a PostScript printer, **psLevel** is either 1 or 2, representing the PostScript level available on the printer. When printing to a non-PostScript printer, **psLevel** is 0. **psLevel** is useful to determine whether or not the output device is a PostScript printer. In addition, when printing to a PostScript printer, **psLevel** is useful to determine the operators that can be sent in any printing code downloaded using the **PDDocWillPrintDoc**, **PDDocWillPrintPage**, and **PDDocDidPrintPage** notifications.
binaryOK	Valid only when printing to a PostScript printer. Indicates whether or not binary data can be sent.
clientData	Pointer to a block of user-supplied data that was passed when the plug-in registered for this notification using **AVAppRegisterNotification**.

Related Notifications

PDDocWillPrintDoc
PDDocWillPrintPage
PDDocDidPrintPages

Methods

AVDocPrintPages
AVDocPrintPagesWithParams

PDDocWillPrintTiledPage

```
ACCB1 void ACCB2 PDDocWillPrintTiledPage (PDDoc doc,
ASInt32 pageNum, ASStm stm, ASInt32 whichSheet,
ASInt32 totalSheets, ASFixedRect* cropRegion, PDTile tile,
void* clientData);
```

Description

This notification is broadcast before a tiled page is printed. Tiled pages can be requested by the user from the Advanced print dialog; plug-ins are made aware of the selection via the tiled page notifications.

Parameters

doc	The document containing the tiled page.
pageNum	The page to be printed.
stm	The PostScript print stream when printing to a PostScript printer, and **NULL** when printing to a non-PostScript printer. When printing to a PostScript printer, plug-ins can write printing commands into **stm** (using **ASStmWrite**) to add marks to pages before any other marks have been made.
whichSheet	The sheet to be printed.
totalSheets	The total number of sheets to be printed.
cropRegion	A pointer to an **ASFixedRect** that represents the region of the **PDPage** being “cropped to” for this sheet.
tile	The **PDTile** currently in use. The fields in this structure can be modified as necessary to affect tiling output.
clientData	Pointer to a block of user-supplied data that was passed when the plug-in registered for this notification using **AVAppRegisterNotification**.

Related Notifications

PDDocDidPrintTiledPage
PDDocPrintingTiledPage

Methods

AVDocPrintPages
AVDocPrintPagesWithParams

PDDocWillRemoveThread

```
ACCB1 void ACCB2 PDDocWillRemoveThread (PDDoc doc,
ASInt32 index, void* clientData);
```

Description

A thread will be removed from a document.

Parameters

doc	The document from which a thread will be removed.
index	The index of the thread that will be removed. Use **PDDocGetThread** to obtain the thread from its index.
clientData	Pointer to a block of user-supplied data that was passed when the plug-in registered for this notification using **AVAppRegisterNotification**.

Related Notifications

PDDocDidRemoveThread

Methods

PDDocRemoveThread

PDDocWillReplacePages

```
ACCB1 void ACCB2 PDDocWillReplacePages (PDDoc doc,
ASInt32 fromPage, ASInt32 toPage, PDDoc srcDoc,
ASInt32 srcFromPage, ASInt32 srcToPage, void* clientData);
```

Description

One or more pages will be replaced.

Parameters

doc	The document in which pages will be replaced.
fromPage	The page number (in **doc**) of the first page that will be replaced.
toPage	The page number (in **doc**) of the last page that will be replaced.
srcDoc	The document that provides the replacement pages.
srcFomPage	The page number (in **srcDoc**) of the first replacement page.
srcToPage	The page number (in **srcDoc**) of the last replacement page.
clientData	Pointer to a block of user-supplied data that was passed when the plug-in registered for this notification using **AVAppRegisterNotification**.

Related Notifications

PDDocDidReplacePages
PDDocWillChangePages

Methods

PDDocReplacePages

PDDocWillSave

```
ACCB1 void ACCB2 PDDocWillSave (PDDoc doc, void* clientData);
```

Description

A document will be saved.

The **PDDocWillSave** notification takes place just before the save operation begins. At the time of a **PDDocWillSave** notification, the current **PDDoc** is valid.

See **PDDocWillSaveEx** for important information on releasing objects derived from the **PDDoc** before it is saved.

See **PDDocDidSave** for information on reacquiring objects from the **PDDoc** after it has been saved.

Parameters

doc	The document that will be saved.
clientData	Pointer to a block of user-supplied data that was passed when the plug-in registered for this notification using **AVAppRegisterNotification**.

Related Notifications

PDDocDidSave
PDDocWillSaveEx

Methods

PDDocSave
PDDocSaveWithParams

PDDocWillSaveEx

```
ACCB1 void ACCB2 PDDocWillSaveEx (PDDoc doc,
PDDocSaveParams params, void* clientData);
```

Description

A document will be saved.

The **PDDocWillSaveEx** notification takes place just before the save operation begins. At the time of a **PDDocWillSaveEx** notification, the current **PDDoc** is valid.

At this time, plug-ins should look at the save flags field **saveFlags** in **params.** In the case of a full save, they should release any objects that they have acquired from the **PDDoc doc** with methods, such as **PDPageRelease**. During this notification, plug-in's should also forget any PD level or Cos level objects that had been derived from the **PDDoc**; these will not be valid after the save.

See **PDDocDidSave** for information on reacquiring objects from the **PDDoc** after it has been saved.

Parameters

doc	The document that will be saved.
params	The **PDDocSaveParams** parameters used when saving a file using **PDDocSaveWithParams**.
clientData	Pointer to a block of user-supplied data that was passed when the plug-in registered for this notification using **AVAppRegisterNotification**.

Related Notifications

PDDocDidSave
PDDocWillSave

Methods

PDDocSave
PDDocSaveWithParams

PDNameTreeNameAdded

```
ACCB1 void ACCB2 PDNameTreeNameAdded (PDNameTree nameTree,
CosObj key, CosObj value, void* clientData);
```

Description

An entry was added to a name tree.

Parameters

nameTree	The name tree to which an entry was added.
key	Cos object of the key for the entry. This object is a Cos integer.
value	Cos object for the value associated with **key**.
clientData	Pointer to a block of user-supplied data that was passed in by the calling application when this notification was registered for using **AVAppRegisterNotification**.

Related Notifications

PDNameTreeNameRemoved

Methods

PDNameTreePut

PDNameTreeNameRemoved

```
ACCB1 void ACCB2 PDNameTreeNameRemoved (PDNameTree nameTree,
CosObj key, void* clientData);
```

Description

An entry was removed from a name tree.

Parameters

nameTree	The name tree from which an entry was removed.
key	The Cos object of the key for the entry. This object is a Cos integer.
clientData	Pointer to a block of user-supplied data that was passed in by the calling application when this notification was registered for using **AVAppRegisterNotification**.

Related Notifications

PDNameTreeNameAdded

Methods

PDNameTreePut
PDNameTreeRemove

PDNameTreeNotifyNameAdded

```
ACCB1 void ACCB2 PDNameTreeNotifyNameAdded
(PDNameTree theTree, CosObj key, CosObj value);
```

Description

A new name has been added to **theTree**.

Parameters

theTree	The **PDNameTree** to which a name had been added.
key	The name of the object within **theTree** that was added. This is a Cos-style string, not a C string.
value	*(Filled by the method)* The Cos object corresponding to the object name that was added to **theTree**.

Related Notifications

PDNameTreeNotifyNameRemoved

Methods

PDNameTreeNotifyNameAdded
PDNameTreeNotifyNameRemoved

PDNameTreeNotifyNameRemoved

```
ACCB1 void ACCB2 PDNameTreeNotifyNameRemoved
(PDNameTree theTree, CosObj removedName);
```

Description

A name has been removed from **theTree**.

Parameters

theTree	The **PDNameTree** from which the name had been removed.
removedName	The name within **theTree** that was removed.

Related Notifications

PDNameTreeNotifyNameAdded

Methods

PDNameTreeNotifyNameAdded
PDNameTreeNotifyNameRemoved

PDNumTreeNumAdded

```
ACCB1 void ACCB2 PDNumTreeNumAdded (PDNumTree numTree,
ASInt32 key, CosObj value, void* clientData);
```

Description

An entry was added to a name tree.

Parameters

nameTree	The name tree to which an entry was added.
key	The key for the entry.
value	Cos object for the value associated with **key**.
clientData	Pointer to a block of user-supplied data that was passed in by the calling application when this notification was registered for using **AVAppRegisterNotification**.

Related Notifications

PDNumTreeNumRemoved

Methods

PDNumTreePut

PDNumTreeNumRemoved

```
ACCB1 void ACCB2 PDNumTreeNumRemoved (PDNumTree numTree,
ASInt32 key, void* clientData);
```

Description

An entry was removed from a name tree.

Parameters

nameTree	The name tree from which an entry was removed.
key	The key for the entry.
clientData	Pointer to a block of user-supplied data that was passed in by the calling application when this notification was registered for using **AVAppRegisterNotification**.

Related Notifications

PDNumTreeNumAdded

Methods

PDNumTreePut
PDNumTreeRemove

PDPageContentsDidChange

```
ACCB1 void ACCB2 PDPageContentsDidChange (PDPage page,
void* clientData);
```

Description

The contents of a page have changed and the page will be redrawn.

Parameters

page	The page whose contents changed.
clientData	Pointer to a block of user-supplied data that was passed when the plug-in registered for this notification using **AVAppRegisterNotification**.

Related Notifications

PDPageContentsDidChangeEx

Methods

PDPageNotifyContentsDidChange
PDPageNotifyContentsDidChangeEx

PDPageContentsDidChangeEx

```
ACCB1 void ACCB2 PDPageContentsDidChangeEx (PDPage page,
ASBool invalidateViews, void* clientData);
```

Description

The contents of a page changed. Unlike **PDPageContentsDidChange**, this notification specifies whether or not the page is redrawn immediately.

Parameters

page	The page whose contents changed.
invalidateViews	If **true**, the page is redrawn immediately. If **false**, redrawing is suppressed.
clientData	Pointer to a block of user-supplied data that was passed when the plug-in registered for this notification using **AVAppRegisterNotification**.

Related Notifications

PDPageContentsDidChange

Methods

PDPageNotifyContentsDidChange
PDPageNotifyContentsDidChangeEx

PDPageDidAddAnnot

```
ACCB1 void ACCB2 PDPageDidAddAnnot (PDPage page,
PDAnnot annot, ASInt32 error, void* clientData);
```

Description

An annotation was added to a page.

Parameters

page	The page to which the annotation was added.
annot	The annotation that was added.
error	Error code. **error** is set to **0** if no errors occurred while adding the annotation. If an error occurred, **error** contains the error code.
clientData	Pointer to a block of user-supplied data that was passed when the plug-in registered for this notification using **AVAppRegisterNotification**.

Related Notifications

PDPageWillAddAnnot

Methods

PDPageAddAnnot
PDPageAddNewAnnot

PDPageDidPrintAnnot

```
ACCB1 void ACCB2 PDPageDidPrintAnnot (PDAnnot annot,
ASInt32 page, ASInt32 status, void* clientData);
```

Description

Clients who register for **PDPageDidPrintAnnot** will be called after the annotation has printed. **status** indicates whether Acrobat tried to print any representation of this annotation.

Parameters

annot	The annotation that Acrobat tried to print.
page	The page on which the annotation occurs.
status	A status of **0** indicates that no representation of the annot was found. A status of **1** indicates the annot was printed.
clientData	Pointer to a block of user-supplied data that was passed when the plug-in registered for this notification using **AVAppRegisterNotification**.

Related Notifications

PDPageDidPrintAnnot
PDPageWillPrintAnnot
PDPageWillPrintAnnots

Methods

Numerous

PDPageDidPrintAnnots

```
ACCB1 void ACCB2 PDPageDidPrintAnnots (PDDoc doc,
ASInt32 page, ASStm stm, void* clientData);
```

Description

Annotations were printed.

Parameters

doc	The document containing the annotations.
page	The page containing the annotations.
stm	The PostScript print stream when printing to a PostScript printer, and **NULL** when printing to a non-PostScript printer. When printing to a PostScript printer, plug-ins can write printing commands into **stm** (using **ASStmWrite**) to add marks to pages before any other marks have been made.
clientData	Pointer to a block of user-supplied data that was passed when the plug-in registered for this notification using **AVAppRegisterNotification**.

Related Notifications

PDPageDidPrintAnnot
PDPageWillPrintAnnot
PDPageWillPrintAnnots

Methods

Numerous

PDPageDidRemoveAnnot

```
ACCB1 void ACCB2 PDPageDidRemoveAnnot (PDPage page,
ASInt32 annotIndex, ASInt32 error, void* clientData);
```

Description

An annotation has been removed from a page.

Parameters

page	The page from which an annotation was removed.
annotIndex	The index (in the page's annotation array) of the annotation that was removed. Because the annotation has already been removed from the array, it is not possible to access the annotation using **annotIndex**.
error	Error code. **error** is set to **0** if no errors occurred while removing the annotation. If an error occurred, **error** contains the error code.
clientData	Pointer to a block of user-supplied data that was passed when the plug-in registered for this notification using **AVAppRegisterNotification**.

Related Notifications

PDPageWillRemoveAnnot

Methods

PDPageRemoveAnnot

PDPageWillAddAnnot

```
ACCB1 void ACCB2 PDPageWillAddAnnot (PDPage page,
ASInt32 addAfter, PDAnnot annot, void* clientData);
```

Description

An annotation will be added to a page.

Parameters

page	The page to which the annotation will be added.
addAfter	The index in the page's annotation array after which the annotation will be added.
annot	The annotation that will be added.
clientData	Pointer to a block of user-supplied data that was passed when the plug-in registered for this notification using **AVAppRegisterNotification**.

Related Notifications

PDPageDidAddAnnot

Methods

PDPageAddAnnot
PDPageAddNewAnnot

PDPageWillPrintAnnot

```
ACCB1 void ACCB2 PDPageWillPrintAnnot (PDAnnot annot,
ASInt32 pageNum, void* clientData);
```

Description

Clients who register for this notification will be notified just before an annotation is expected to print. This notification allows plug-ins that manage annotations to prepare the appearance of the annotation for printing purposes. There is no requirement that the annot referred to in this parameter list actually have a print appearance.

Parameters

annot	The annotation to print.
pageNum	The page on which the annotation occurs.
clientData	Pointer to a block of user-supplied data that was passed when the plug-in registered for this notification using **AVAppRegisterNotification**.

Related Notifications

PDPageDidPrintAnnot
PDPageDidPrintAnnots
PDPageWillPrintAnnot

Methods

Numerous

PDPageWillPrintAnnots

```
ACCB1 void ACCB2 PDPageWillPrintAnnots (PDDoc doc,
ASInt32 pageNum, ASStm stm, void* clientData);
```

Description

Clients who register for **PDPageWillPrintAnnots** will be called before the printed representations of any annotations have been emitted. If a page has no annotations, this will not be called. If a page has annotations, this will be called. There may not be any code emitted for the annotations on that page, however, since they may not have any appearance for printing. The **status** parameter passed in the **PDPageDidPrintAnnot** will indicate this.

Parameters

doc	The document containing the annotations.
pageNum	The page to be printed.
stm	The PostScript print stream when printing to a PostScript printer, and **NULL** when printing to a non-PostScript printer. When printing to a PostScript printer, plug-ins can write printing commands into **stm** (using **ASStmWrite**) to add marks to pages before any other marks have been made.
clientData	Pointer to a block of user-supplied data that was passed when the plug-in registered for this notification using **AVAppRegisterNotification**.

Related Notifications

PDPageDidPrintAnnot
PDPageDidPrintAnnots
PDPageWillPrintAnnot

Methods

Numerous

PDPageWillRemoveAnnot

```
ACCB1 void ACCB2 PDPageWillRemoveAnnot (PDPage page,
ASInt32 annotIndex, void* clientData);
```

Description

An annotation will be removed from a page.

Parameters

page	The page from which an annotation will be removed.
annotIndex	The index (in the page's annotation array) of the annotation that will be removed. Use **PDPageGetAnnotIndex** to obtain the annotation from its index.
clientData	Pointer to a block of user-supplied data that was passed when the plug-in registered for this notification using **AVAppRegisterNotification**.

Related Notifications

PDPageDidRemoveAnnot

Methods

PDPageRemoveAnnot

PDThreadDidChange

```
ACCB1 void ACCB2 PDThreadDidChange (PDThread thread,
void* clientData);
```

Description

A thread was changed.

Parameters

thread	The thread that changed.
clientData	Pointer to a block of user-supplied data that was passed when the plug-in registered for this notification using **AVAppRegisterNotification**.

Related Notifications

PDDocDidAddThread

Methods

PDThreadSetInfo

PSPrintAfterBeginPageSetup

```
ACCB1 void ACCB2 PSPrintAfterBeginPageSetup (PDDoc doc,
ASInt32 page, ASStm stm, void* clientData);
```

Description

This notification is broadcast after the beginning of the *Page Setup* (immediately after writing **%%BeginPageSetup**) during the printing of a page to a PostScript printer with the methods **PDFLPrintDoc** (only available with PDF Library SDK) or **PDDocPrintPages** (only available with PDF Library SDK). At this point it is possible to use **setpagedevice** and set the graphics state but marks cannot be made on the page.

Parameters

doc	The document from which a page is printed.
page	Page number of the page being printed.
stm	The PostScript print stream. PostScript commands can be added to the print stream using **ASStmWrite**. Some printer drivers (Windows PS4) may not allow additions to the PostScript stream at this point.
clientData	Pointer to a block of user-supplied data that was passed in by the calling application when this notification was registered for using **AVAppRegisterNotification**.

Related Notifications

PSPrintAfterPageTrailer

Methods

PDDocPrintPages (Only available with PDF Library SDK)
PDFLPrintDoc (Only available with PDF Library SDK)

PSPrintAfterBeginProlog

```
ACCB1 void ACCB2 PSPrintAfterBeginProlog (PDDoc doc,
ASStm stm, void* clientData);
```

Description

This notification is broadcast after the beginning of the PostScript *Prolog* (immediately after writing **%%BeginPrologue**) during the printing of a document to a PostScript printer with the methods **PDFLPrintDoc** (only available with PDF Library SDK) or **PDDocPrintPages** (only available with PDF Library SDK). The Prolog is a set of application-specific procedure definitions that an application may emit in a PostScript stream.

At this point nothing should be added to the PostScript print stream that modifies the graphics state or puts marks on the page. Callers should only emit procset resources.

Parameters

doc	The document that is being printed.
stm	The PostScript print stream. PostScript commands can be added to the print stream using **ASStmWrite**.
clientData	Pointer to a block of user-supplied data that was passed in by the calling application when this notification was registered for using **AVAppRegisterNotification**.

Related Notifications

PSPrintAfterBeginSetup

Methods

PDDocPrintPages (Only available with PDF Library SDK)
PDFLPrintDoc (Only available with PDF Library SDK)

PSPrintAfterBeginSetup

```
ACCB1 void ACCB2 PSPrintAfterBeginSetup (PDDoc doc, ASStm stm,
void* clientData);
```

Description

This notification is broadcast after the beginning of the *Document Setup* (immediately after writing **%%BeginSetup**) during the printing of a page to a PostScript printer with the methods **PDFLPrintDoc** (only available with PDF Library SDK) or **PDDocPrintPages** (only available with PDF Library SDK). During Document Setup, fonts may be downloaded, **setpagedevice** may be called, procsets may be initialized, the graphics state may be initialized, and so forth.

Parameters

doc	The document that is being printed.
stm	The PostScript print stream. PostScript commands can be added to the print stream using **ASStmWrite**.
clientData	Pointer to a block of user-supplied data that was passed in by the calling application when this notification was registered for using **AVAppRegisterNotification**.

Related Notifications

PSPrintBeforeEndSetup

Methods

PDDocPrintPages (Only available with PDF Library SDK)
PDFLPrintDoc (Only available with PDF Library SDK)

PSPrintAfterEmitExtGState

```
ACCB1 void ACCB2 PSPrintAfterEmitExtGState (ASStm stm,
void* clientData);
```

Description

This notification is broadcast after extended graphics state parameters are emitted while printing to a PostScript printer with the methods **PDFLPrintDoc** (only available with PDF Library SDK) or **PDDocPrintPages** (only available with PDF Library SDK).

These parameters are typically device-dependent. For information on extended graphics state, see Section 4.3.4 on extended graphics states in *PDF Reference*.

Parameters

stm	The PostScript print stream. PostScript commands can be added to the print stream using **ASStmWrite**.
clientData	Pointer to a block of user-supplied data that was passed in by the calling application when this notification was registered for using **AVAppRegisterNotification**.

Related Notifications

None

Methods

PDDocPrintPages (Only available with PDF Library SDK)
PDFLPrintDoc (Only available with PDF Library SDK)

PSPrintAfterPageTrailer

```
ACCB1 void ACCB2 PSPrintAfterPageTrailer (PDDoc doc,
ASStm stm, void* clientData);
```

Description

This notification is broadcast after the page trailer is emitted (immediately after writing **%%PageTrailer**) during the printing of a page to a PostScript printer with the methods **PDFLPrintDoc** (only available with PDF Library SDK) or **PDDocPrintPages** (only available with PDF Library SDK). At this point it is possible to resolve comments (at end) and emit cleanup code.

Parameters

doc	The document from which a page is printed.
stm	The PostScript print stream. PostScript commands can be added to the print stream using **ASStmWrite**.
clientData	Pointer to a block of user-supplied data that was passed in by the calling application when this notification was registered for using **AVAppRegisterNotification**.

Related Notifications

PSPrintAfterBeginPageSetup

Methods

PDDocPrintPages (Only available with PDF Library SDK)
PDFLPrintDoc (Only available with PDF Library SDK)

PSPrintAfterTrailer

```
ACCB1 void ACCB2 PSPrintAfterTrailer (PDDoc doc, ASStm stm,
void* clientData);
```

Description

This notification is broadcast after the DSC trailer is emitted (immediately after writing **%%Trailer**) during the printing of a page to a PostScript printer with the methods **PDFLPrintDoc** (only available with PDF Library SDK) or **PDDocPrintPages** (only available with PDF Library SDK). At this point it is possible to resolve comments (at end) and emit cleanup code.

Parameters

doc	The document that is being printed.
stm	The PostScript print stream. PostScript commands can be added to the print stream using **ASStmWrite**.
clientData	Pointer to a block of user-supplied data that was passed in by the calling application when this notification was registered for using **AVAppRegisterNotification**.

Related Notifications

PSPrintBeforeEndSetup

Methods

PDDocPrintPages (Only available with PDF Library SDK)
PDFLPrintDoc (Only available with PDF Library SDK)

PSPrintBeforeAcrobatProcsets

```
ACCB1 void ACCB2 PSPrintBeforeAcrobatProcsets (PDDoc doc,
ASStm stm, void* clientData);
```

Description

Clients that register for this notification will be called back during PostScript printing—just prior to emission of the Acrobat procsets.

Parameters

doc	The document that is being printed.
stm	The PostScript print stream. PostScript commands can be added to the print stream using **ASStmWrite**.
clientData	Pointer to a block of user-supplied data that was passed in by the calling application when this notification was registered for using **AVAppRegisterNotification**.

Related Notifications

PSPrintBeforeEndSetup

Methods

PDDocPrintPages (Only available with PDF Library SDK)
PDFLPrintDoc (Only available with PDF Library SDK)

PSPrintBeforeEndComments

```
ACCB1 void ACCB2 PSPrintBeforeEndComments (PDDoc doc,
ASStm stm, void* clientData);
```

Description

This notification is broadcast after the DSC page-level comments that apply to all pages have been emitted (immediately before writing **%%EndComments**) during the printing of a page to a PostScript printer with the methods **PDFLPrintDoc** (only available with PDF Library SDK) or **PDDocPrintPages** (only available with PDF Library SDK).

Parameters

doc	The document that is being printed.
stm	The PostScript print stream. PostScript commands can be added to the print stream using **ASStmWrite**.
clientData	Pointer to a block of user-supplied data that was passed in by the calling application when this notification was registered for using **AVAppRegisterNotification**.

Related Notifications

PSPrintAfterBeginSetup
PSPrintBeforeEndSetup

Methods

PDDocPrintPages (Only available with PDF Library SDK)
PDFLPrintDoc (Only available with PDF Library SDK)

PSPrintBeforeEndSetup

```
ACCB1 void ACCB2 PSPrintBeforeEndSetup (PDDoc doc, ASStm stm,
void* clientData);
```

Description

This notification is broadcast before the end of *Document Setup* (immediately before writing **%%EndSetup**) during the printing of a page to a PostScript printer with the methods **PDFLPrintDoc** (only available with PDF Library SDK) or **PDDocPrintPages** (only available with PDF Library SDK). At this point all of the job level resources and procsets have been added to the print stream.

Parameters

doc	The document that is being printed.
stm	The PostScript print stream. PostScript commands can be added to the print stream using **ASStmWrite**. Some printer drivers (Windows PS4) may not allow additions to the PostScript stream at this point.
clientData	Pointer to a block of user-supplied data that was passed in by the calling application when this notification was registered for using **AVAppRegisterNotification**.

Related Notifications

PSPrintAfterBeginSetup

Methods

PDDocPrintPages (Only available with PDF Library SDK)
PDFLPrintDoc (Only available with PDF Library SDK)

Errors

Error Systems

ErrSysNone

General error and out of memory

ErrSysCos

CosStore, filters

ErrSysCosSyntax

Cos syntax

ErrSysPDDoc

PDDoc and family, Page tree, bookmarks

ErrSysPDPage

PDPage and family, thumbs, annots

ErrSysPDMetadata

PDMetadata

ErrSysPDModel

Global PD

ErrSysAcroView

AcroView

ErrSysPage

Page parsing and RIPping

ErrSysPDFEdit

PDFEdit

ErrSysPDSEdit

PDSEdit

ErrSysFontSvr

Font Server

ErrSysRaster

Rasterizer

ErrSysASFile

ASFile I/O

ErrSysXtnMgr

Extension Manager

ErrSysXtn

Errors registered by plug-ins (see **ASRegisterErrorString**) are automatically assigned to this error system.

ErrSysMDSystem

Platform-specific system

ErrSysMDApp

Platform-specific application

Severities

ErrAlways

Always display error, even if others are suppressed.

ErrSilent

Never display a message.

ErrSuppressable

Display a message if the user has not suppressed errors.

ErrWarning

Display a warning.

ErrNoError

No error occurred.

ErrSysAcroView Errors

System	**ErrSysAcroView**
Severity	**ErrAlways**
Platforms	All

avErrActionExternal

This action cannot be performed from within an external window.

avErrActionFullScreen

This action cannot be performed during full-screen mode.

avErrActionRestricted

This action can not be performed.

avErrBadActionCopy

No **AVActionCopyProc** is registered in an action handler and an action copy request occurred.

avErrBadAnnotationCopy

No **AVAnnotHandlerCopyProc** registered in an annotation handler and an annotation copy request occurred.

avErrCantOpenDialog

Acrobat can not open this file. There is a modal dialog open.

avErrCantOpenMoreThanTenDocs

No more than ten documents can be opened at a time.

avErrCantOpenPrinting

Acrobat can not open this file while printing another document.

avErrNoError

No error.

avErrNoText

There is no text.

avErrPrintJobTooBig

There are too many pages to print.

avErrTooManyChars

There is too much text to display. Cannot display more than 32,000 characters.

ErrSysMDSystem Errors (Macintosh)

System	**ErrSysMDSystem**
Severity	**ErrAlways**
Platforms	Macintosh

cfMacfBsyErr

This file is busy and cannot be deleted. (**fBsyErr**)

cfMacdirFulErr

The directory is full. (**dirFulErr**).

cfMacdskFulErr

The document's disk or the disk used for temporary files is full. (**dskFulErr**).

cfMacdsMemFullErr

Out of memory (-26). (**dsMemFullErr**)

cfMacdupFNErr

Another file already exists under the same name. (**dupFNErr**)

cfMaceofErr

End of file was reached unexpectedly. (**eofErr**)

cfMacfLckdErr

This file is locked. (**fLckdErr**)

cfMacGenPSErr

A Postscript error has occurred (-8133).

cfMaciIOAbort

An I/O error has occurred (-27). (**iIOAbort**)

cfMacioErr

A file I/O error has occurred. (**ioErr**)

cfMaciPrSavPFil

Error saving print file (-1).

cfMacmemFullErr

Out of memory (-108). (**memFullErr**)

cfMacNoErr

No error. (**noErr**).

cfMacnoMacDskErr

This disk is not a Macintosh disk. (**noMacDskErr**)

cfMacnsvErr

There is no such volume available. (**nsvErr**).

cfMacopWrErr

This file is already open or in use by another application. (**opWrErr**)

cfMacpermErr

You do not have permission to open this file.
(**permErr**)

cfMacresNotFound

Tried to get a nonexistent resource (-192). (**resNotFound**)

cfMacServerLostConnection

This file's server connection has closed down. (-1070) (**aspParamErr**)

cfMacvLckdErr

This volume is locked and cannot be written to. (**vLckdErr**)

cfMacvolOffLinErr

This file's volume is not available. (**volOffLinErr**)

cfMacwrPermErr

You do not have permission to write to this file. (**wrPermErr**)

ErrSysCos Errors

System	**ErrSysCos**
Severity	**ErrSuppressable** **ErrAlways**
Platforms	All

cosErrAfterSave

Implementation failure: this document is now invalid.

cosErrArrayBounds

Array out-of-bounds error.

cosErrBadFilterName

A stream specifies an unknown filter.

cosErrBadIndex

Bad master index.

cosErrBadSyntax

Syntax error.

cosErrCancelSave

A Save operation was canceled.

cosErrCantOpenTempFile

A temporary file could not be opened.

cosErrCCFError

Error in CCITT fax data filter.

cosErrDCTError

Error in JPEG data filter.

cosErrDictKeyNotName

Dictionary key must be a name object.

cosErrDocTableFull

Cos document table full.

cosErrEncryptionErr

Error in encryption filter.

This error occurs if the:

- RC4 encryption code fails to initialize.
- RC4 encryption code fails to update its state when requested.
- Document's security handler has been changed since the document was last saved, and the length of the **`cryptData`** passed internally is too small to hold the new **`cryptData`**.

cosErrExpectedArray

Expected an array object.

cosErrExpectedBoolean

Expected an **ASBool** object.

cosErrExpectedDict

Expected a dictionary object.

cosErrExpectedDirect

Expected a direct object.

cosErrExpectedName

Expected a name object.

cosErrExpectedNull

Expected a **NULL** object.

cosErrExpectedNumber

Expected a number object.

cosErrExpectedStream

Expected a stream object.

cosErrExpectedString

Expected a string object.

cosErrInt16OutOfRange

A number is out of range.

cosErrInvalidAssignment

This direct object already has a container.

cosErrInvalidObj

Desired operation cannot be performed on this object.

cosErrListOverflow

Operation or data is too complex.

cosErrLZWError

Error in LZW data filter.

cosErrNeedFullSave

This file must be saved with a full save.

cosErrNeedRebuild

The file needs to be repaired.

cosErrNoError

No error.

cosErrOldLinFormat

Obsolete format: treating file as non-linearized.

cosErrReadError

Read error.

cosErrRebuildFailed

Could not repair file.

cosErrStreamTooShort

Stream source is shorter than specified length.

cosErrTempFileFull

The temporary file is full or nearly full. Close or save any modified documents.

cosErrTempTooShort

Temporary file unexpectedly short.

cosErrWriteError

Write error.

ErrSysCosSyntax Errors

System	**ErrSysCosSyntax**
Severity	**ErrSuppressable**
Platforms	All

cosSynErrBadArrayDict

Expected dictionary or array.

cosSynErrBadCharInHexString

Non-hex character in a hex string.

cosSynErrBadDict

Error reading dictionary.

cosSynErrBadFRef

Bad foreign object reference.

cosSynErrBadLinearized

Error reading linearized hint data.

cosSynErrBadObject

Error reading object.

cosSynErrBadObjectLabel

Object label badly formatted.

This error occurs when the Acrobat viewer tries to read a Cos object in a file. It occurs if the object's:

- Object number is not an integer.
- Object number does not match the object number the viewer expected.
- Generation number is not an integer.
- Generation number does not match the generation number the viewer expected.
- Object/generation number line does not end with **obj**.

One common cause of this error is incorrect offsets in the xref table. For example, if the offset to object 16 is one byte too high, Acrobat sees it as being object number 6—instead of 16—and raises this exception.

cosSynErrBadTrailerStart

Trailer dictionary start missing '<<'.

cosSynErrBadXref

Missing 'xref'.

cosSynErrBadXrefEntry

Error reading xref entry.

cosSynErrBadXrefHeader

Xref header should be two integers.

cosSynErrExtraEndStream

Unexpected endstream.

cosSynErrImageNeverEnded

End of image not found.

cosSynErrNoEndStream

Missing endstream.

cosSynErrNoEOF

Missing ‘%%EOF’.

cosSynErrNoError

No error.

cosSynErrNoHeader

File does not begin with ‘%PDF-’.

cosSynErrNoStartAddress

Value of startxref address not an integer.

cosSynErrNoStartXRef

Could not find startxref address.

cosSynErrPStackUnderflow

Parse stack underflow while reading object.

cosSynErrStringTooLong

String too long.

cosSynErrTokenTooLong

Token too long.

cosSynErrUnexpectedArray

Unexpected end of array.

cosSynErrUnexpectedDict

Unexpected end of dictionary.

cosSynErrUnexpectedType

Unexpected token type.

cosSynErrUnknownName

Unrecognized object name.

This error occurs if the Acrobat viewer is reading a Cos object and encounters a token that is not a number, name, or string, and which is not one of the keywords: **true**, **false**, **null**, **[**, **]**, **<<**, **>>**, **stream**, **ID**, **endobj**, **startxref**, **endstream**, and **R**. This error also occurs if the Acrobat viewer encounters one of these keywords in an unexpected place, for example a **]** without a preceding **[**.

cosSynErrUnknownTokenType

Unrecognized token type.

cosSynErrUnterminatedString

Un-terminated string.

ErrSysASFile Errors

System	**ErrSysASFile**
Severity	**ErrAlways**
Platforms	All

fileErrAlreadyOpen

This file is already open or in use by another application.

fileErrBusy

This file is busy and cannot be deleted.

fileErrBytesNotReady

Bytes that have been requested by the viewer have not yet arrived. This file error occurs only over slow file systems.

fileErrDirFull

The directory is full.

fileErrDiskFull

The document's disk or the disk used for temporary files is full.

fileErrEOF

End of file was reached unexpectedly.

fileErrExists

Another file already exists under the same name.

fileErrFNF

This file cannot be found.

fileErrGeneral

A file error has occurred.

fileErrIO

A file I/O error has occurred.

fileErrIOTimeout

A file I/O error has occurred. The file connection timed out.

fileErrLocked

This file is locked.

fileErrNoErr

No error.

fileErrNSV

The disk containing this file is not available.

fileErrOpenFailed

File open failed.

fileErrPerm

You do not have access to this file.

fileErrRead

A file read error has occurred.

fileErrUserRequestedStop

User requested stop.

fileErrVLocked

This disk is locked and cannot be written to.

fileErrWrite

A file write error has occurred.

fileErrWrPerm

You do not have permission to write to this file.

ErrSysFontSvr Errors

System	**ErrSysFontSvr**
Severity	**ErrAlways**
Platforms	All

fsErrBadParameter

Bad parameter passed to font server.

fsErrDownloadAborted

Font download aborted.

fsErrDownloadFailed

Font download failed.

fsErrInitFailed

Initialization of the font server module failed.

fsErrNeedNewATM

A new version of Adobe Type Manager is required.

fsErrNoATM

Adobe Type Manager was not found.

fsErrNoError

No error.

fsErrNoMMFonts

No multiple master fonts were found.

fsErrNoT1ZapfDingbats

The Type 1 font ‘Zapf Dingbats’ must be installed.

ErrSysNone Errors

System	**ErrSysNone**
Severity	**ErrAlways**
Platforms	All

genErrBadParm

Bad parameter.

genErrBadUnlock

Attempt to release an unlocked object.

genErrExceptionStackOverflow

Exception stack overflow.

genErrGeneral

An internal error occurred.

genErrListOverflow

Operation or data is too complex.

genErrMethodNotImplemented

Attempted to call a method that has not been implemented.

genErrNoError

No error.

genErrNoMemory

Out of memory.

genErrResourceLoadFailed

Failed to load an application resource (internal error).

ErrSysMDApp Errors

System	**ErrSysMDApp**
Severity	**ErrAlways**
Platforms	Macintosh

mdAppCantPrintToPDFWriter

Cannot print to Acrobat PDFWriter.

mdAppErrNoError

No error.

mdAppNoDAsWhilePrint

Please close all Desk Accessories before printing.

mdAppNoPrinter

Printing is not possible until you have chosen a Printer using the Chooser.

ErrSysPage Errors

System	**ErrSysPage**
Severity	**ErrSuppressable** **ErrSilent**
Platforms	All

pageErrArrayLenWrong

Array length is out of range.

pageErrBadColorSpace

Invalid ColorSpace.

pageErrBadContents

The page contents object has the wrong type.

pageErrBadDecodeArray

Bad decode array.

pageErrBadEGS

Invalid Extended Graphics State.

pageErrBadEPSColorSpace

An image uses a color space that will not separate correctly in some applications.

pageErrBadForm

Invalid Form.

pageErrBadFunction

Invalid Function resource.

pageErrBadPattern

Invalid Pattern.

pageErrBadType3Font

Invalid Type 3 font.

pageErrBadTypeInXTextArray

Bad object type within a text operator array.

pageErrColorOutOfRange

A color value is out-of-range.

pageErrColorSpaceNotFound

Could not find the specified color space.

pageErrEGStateNotFound

Could not find the specified Extended Graphics State.

pageErrErrorReadingPage

There was an error reading page near the contents.

pageErrFontNotSet

Font has not been set.

pageErrFormNotFound

Could not find the Form named ‘%s’.

pageErrErrorParsingImage

There was an error while trying to parse an image.

pageErrExpectedEndOfColor

Expected end of color space.

pageErrExpectedHexOrASC85

Expected ASCIIHexadecimal or ASCII85 string.

pageErrImageExpectedEI

Expected ‘EI’ while parsing an image.

pageErrImageExpectedNumber

Expected a number while parsing an image.

pageErrFontNotInResDict

Could not find a font in the Resources dictionary—using Helvetica instead.

pageErrFontNotInResources

A font is not in the Resources dictionary.

pageErrFormTypeNotAvailable

Specified Form type is not supported.

pageErrIllegalOpInPath

Illegal operation inside a path.

pageErrIllegalOpInTextObj

Illegal operation inside a text object.

pageErrIllegalOpInTextOutline

There is an illegal operator inside a text outline object.

pageErrIllegalTextOp

Illegal operation outside text object.

pageErrImageTooBig

Image in Form, Type 3 font, or Pattern is too big.

pageErrInvalidDash

Dash arguments are invalid.

pageErrInvalidGRestore

Invalid restore.

pageErrInvalidImageMaskDepth

An image is specified as an image mask with more than 1 bit per pixel.

pageErrMissingKey

Dictionary is missing the key ‘%s’

pageErrMissingResource

A resource is missing.

pageErrNoError

No error.

pageErrNumberOutOfRange

A number value is out of range.

pageErrParseContextError

Error while parsing a Form, Type 3 font, or Pattern.

pageErrReadLessImageData

Read less image data than expected.

pageErrSeveralParsingErrors

There were several parsing errors on this page.

pageErrTooFewPathOps

Too few operands in path.

pageErrOperandTooLarge

An operand is too large.

pageErrOpTooLarge

Operand too large.

pageErrPatternNotFound

Could not find the Pattern with the specified name.

pageErrPatternTypeNotAvailable

Pattern type is not supported.

pageErrReadLessImageColor

Read less image color data than expected.

pageErrReadLessImageData

Read less image data than expected.

pageErrRecursiveMachine

Internal error—machine called recursively.

pageErrTokenTypeNotRec

Token type not recognized.

pageErrTooFewArgs

There were too few arguments.

pageErrTooFewOps

Too few operands.

pageErrTooManyArgs

There were too many arguments.

pageErrUnexpectedOpInDisplay

Found an unexpected operator in the display list.

pageErrUnknownColorSpace

Unknown color space.

pageErrUnknownFilterName

Unknown filter name.

pageErrUnknownXObjectType

Unknown **XObject** type.

pageErrUnrecognizedToken

An unrecognized token ‘%s’ was found.

pageErrWrongArgsForSetColor

Wrong number of arguments for a **setcolor** operator.

pageErrWrongNumOpsInCurve

A curve operator has the wrong number of operands.

pageErrWrongOperand

Wrong operand type—expected type ‘%s’.

pageErrWrongOpType

Wrong operand type.

pageErrXObjectNotFound

Could not find the **XObject** named ‘%s’.

ErrSysPDDoc Errors

System	**ErrSysPDDoc**
Severity	**ErrSuppressable** **ErrAlways**
Platforms	All

pdErrAbortNotes

Creation of the notes file was canceled.

pdErrAfterSave

This document was successfully saved, but an error occurred after saving the document. Please close and reopen the document.

pdErrAlreadyOpen

This file is already open.

pdErrATMMemory

ATM is running out of memory. Text in font ‘%s’ may not render properly.

pdErrBadAction

Invalid action object.

pdErrBadAnnotation

Invalid annotation object.

pdErrBadAnnotColor

Invalid annotation color (only RGB colors are allowed).

pdErrBadBaseObj

The base pages object is missing or invalid.

pdErrBadBead

Invalid article element.

pdErrBadBookmark

Invalid bookmark object.

pdErrBadCMap

The font contains a bad CMap /Encoding.

pdErrBadFileSpec

Invalid file specification object.

pdErrBadFont

Bad font object or font descriptor object.

pdErrBadFontBBox

The font ‘%s’ contains a bad /BBox.

pdErrBadFontDescMetrics

The font ‘%s’ contains bad /FontDescriptor metrics.

pdErrBadFontFlags

The font ‘%s’ contains bad /Flags.

pdErrBadFontWidths

The font ‘%s’ contains bad /Widths.

pdErrBadOutlineObj

The outlines object is missing or invalid.

pdErrBadPageObj

A page object is missing or invalid.

pdErrBadPageTree

The document’s page tree contains an invalid node.

pdErrBadResMetrics

Invalid or corrupt font metrics in the resource file.

pdErrBadRootObj

The root object is missing or invalid.

pdErrBadThread

Invalid article object.

pdErrBookmarksError

There is an error in the bookmarks.

pdErrCancelSave

A Save operation was canceled.

pdErrCannotBeBlankPage

The page number cannot be left blank.

pdErrCannotDeleteAllPages

You cannot delete all pages. At least one page must remain.

pdErrCannotMergeWithSubsetFonts

Documents contain subset fonts that have the same name and cannot be merged.

pdErrCannotOpenMoreBkMark

Cannot open more bookmarks.

pdErrCannotOpenNotes

An error occurred while creating the document notes file.

pdErrCannotReopenDoc

This document was successfully saved, but an error occurred after saving the document. Close and reopen the document.

pdErrCantUseNewVersion

This file contains information not understood by the viewer. It cannot be used for this operation.

pdErrCopyPageFailed

The copy of a page failed.

pdErrEmbeddingFont

Error while trying to embed a font.

pdErrExceedEncryptionLength

Supported encryption key length exceeded.

pdErrExceedEncryptionVersion

Encryption version not supported by current header.

pdErrHostEncodingNotSet

The application has not set the host encoding.

pdErrInvalidPageNumber

“%s” is an invalid page number.

pdErrIsFileLocked

Unable to open file for writing. It may be locked or unavailable.

pdErrMissingGlyphs

Unable to find a substitution font with all the characters used by the font named “%s”. Some characters may not be displayed or printed.

pdErrMissingSubsetFont

A font required for font substitution is missing.

pdErrNeedCryptHandler

Cannot execute this command on an unsecured document.

pdErrNeedJapanese

An error has occurred that may be fixed by installing the latest version of the Japanese Language Support package.

pdErrNeedKorean

An error has occurred that may be fixed by installing the latest version of the Korean Language Support package.

pdErrNeedPassword

This document requires a password.

pdErrNeedRebuild

This file is damaged.

pdErrNeedSimpChinese

An error has occurred that may be fixed by installing the latest version of the Traditional Chinese Language Support package.

pdErrNeedTradChinese

An error has occurred that may be fixed by installing the latesta version of the Traditional Chinese Language Support package.

pdErrNoCryptHandler

The security plug-in required by this command is unavailable (that is, the necessary security handler is not registered).

pdErrNoError

No error.

pdErrNoNotes

This document has no notes.

pdErrNoPDDocForCosDoc

There is no **PDDoc** associated with this **CosDoc**.

pdErrNotEnoughMemoryToOpenDoc

There is not enough memory available to open the document.

pdErrNotEnoughSpaceForTempFile

There is not enough temporary disk space for this operation.

pdErrNotValidPage

There is no page numbered “%s” in this document.

pdErrOldATMVersion

The font ‘%s’ cannot be displayed with the installed version of ATM.

pdErrOldEncryption

This viewer cannot decrypt this document.

pdErrOpNotPermitted

This operation is not permitted. Acrobat security does not allow content copying or extraction. These operations should be permitted when the document’s master password is used.

pdErrOptMemory

There is not enough memory to optimize this file.

pdErrPagesLockedNotDeleted

One or more pages are in use and could not be deleted.

pdErrRequireTrustedMode

Only Adobe-certified Acrobat plug-ins are allowed while viewing this document.

pdErrStartLessThanEnd

The starting page number must be less than or the same as the ending page number.

pdErrTextStringTooShort

There are not enough bytes in text string for multibyte character code.

pdErrThreadProcessing

Error while processing articles.

pdErrThumbError

Error while processing thumbnail.

pdErrTooManyPagesForInsert

Inserting this file would result in a document with too many pages.

pdErrTooManyPagesForOpen

This file cannot be opened because it contains too many pages.

pdErrTrySaveAs

This file can only be saved using Save As.

pdErrUnableToCloseDueToRefs

Unable to close document due to outstanding references.

pdErrUnableToExtractFont

Unable to extract the embedded font ‘%s’. Some characters may not display or print correctly.

pdErrUnableToExtractFontErr

Unable to extract embedded font.

pdErrUnableToFindFont

Unable to find or create the font ‘%s’. Some characters may not display or print correctly.

pdErrUnableToOpenDoc

This file could not be opened.

pdErrUnableToRead

Unable to read file.

pdErrUnableToRecover

Unable to recover original file.

pdErrUnableToRenameTemp

Unable to rename temporary file to Save As name.

pdErrUnableToWrite

Unable to write file.

pdErrUnableToXlateText

Some text in the font and character ‘%s’ could not be displayed or printed correctly. The font could not be re-encoded.

pdErrUnknownAction

Unknown action type.

pdErrUnknownFileType

This is not a valid Portable Document File (PDF) document. It cannot be opened.

pdErrUnknownProcsets

Information needed to print a page is unavailable.

pdErrWhileRecoverInsertPages

There was an error while inserting or extracting pages and another error while trying to recover.

pdErrZeroPageFile

This file cannot be opened because it has no pages.

ErrSysPDPage Errors

System	**ErrSysPDPage**
Severity	**ErrAlways** **ErrSuppressable** **ErrSilent**
Platforms	All

pdPErrBadType3Font

Invalid Type 3 font.

pdPErrFormTooComplex

Form is too complex to print.

pdPErrNoError

No error.

pdPErrPageDimOutOfRange

The dimensions of this page are out-of-range.

pdPErrType3TooComplex

Type 3 font is too complex to print.

pdPErrUnableToCreateRasterPort

Creation of a raster port failed.

ErrSysPDMetadata Errors

System	**ErrSysPDMetadata**
Severity	**ErrAlways**
Platforms	All

pdMetadataErrBadXAP

The XAP metadata supplied was not syntactically correct RDF.

pdMetadataErrBadPDF

XAP metadata processing found a syntax error in PDF.

pdMetadataErrCouldntCreateMetaXAP

Could not create internal representation of XAP metadata.

pdMetadataErrInternalError

An internal error occurred while processing XAP metadata.

ErrSysPDModel Errors

System	**ErrSysPDModel**
Severity	**ErrAlways**
Platforms	All

pdModErrDuplicateCryptName

A security handler is already registered with this name.

pdModErrEncTablesFailed

Unable to initialize font encoding tables.

pdModErrNoError

No error.

ErrSysPDSEdit Errors

System	**ErrSysPDSEdit**
Severity	**ErrAlways**
Platforms	All

pdsErrAlreadyExists

There is already a table entry with the same name.

pdsErrBadPDF

An incorrect structure was found in the PDF file.

pdsErrCantDo

Some software required to perform this operation is not present in this version of Adobe Acrobat.

pdsErrRequiredMissing

A required field was missing from a dictionary.

pdsErrWrongTypeEntry

Dictionary entry has wrong Cos type.

pdsErrWrongTypeParameter

Wrong type parameter supplied to a PDS procedure.

ErrSysPDFEdit Errors

System	**ErrSysPDFEdit**
Severity	**ErrAlways**
Platforms	All

peErrBadBlockHeader

Bad block header for Type 1 embedded stream.

peErrCantCreateFontSubset

Unable to create embedded font subset.

peErrCantEmbedFont

This font is licensed and cannot be embedded.

peErrCantGetAttrs

Unable to get attributes for font.

peErrCantGetImageDict

Unable to get image dictionary.

peErrCantGetWidths

Unable to get widths for font.

peErrCantReadImage

Unable to read image data.

peErrFontToEmbedNotOnSys

Unable to find font to embed on this system.

peErrNoError

No error.

peErrPStackUnderflow

PDFEdit parse stack underflow while reading object.

peErrUnknownPDEColorSpace

Unknown **PDEColorSpace** value.

peErrUnknownResType

Unknown **PDEObject** resource type.

peErrWrongPDEObjectType

Incorrect **PDEObject** type.

ErrSysRaster Errors

System	**ErrSysRaster**
Severity	**ErrAlways**
Platforms	All

rasErrCreatePort

Creation of rasterizer port failed.

rasErrDraw

A rasterizer error occurred.

rasErrInitFailed

Initialization of the rasterizer module failed.

rasErrNoError

No error.

ErrSysMDSystem Errors (Windows)

System ErrSysMDSystem

Severity ErrAlways

Platforms Windows

WinAccessErr

Access denied.

WinBadDiskErr

Badly formatted disk.

WinBadDriveErr

Invalid drive.

WinBadFileErr

The file does not exist.

WinBadHdlErr

Bad file handle.

WinBadPathErr

The path does not exist.

WinDeviceErr

Device does not exist.

WinExistsErr

File already exists.

WinGeneralErr

General failure.

WinLockErr

Lock violation.

WinMemErr

Not enough memory.

WinNotDosErr

Not an MS-DOS disk.

WinShareErr

Sharing violation.

WinTooManyErr

Too many open files.

WinWrPermErr

You do not have write permission.

ErrSysXtnMgr Errors

System	**ErrSysXtnMgr**
Severity	**ErrAlways**
Platforms	All (some errors are Macintosh-only)

xmErr68KOnly

Description	Only the 68K Viewer can load this plug-in (Macintosh).
System	**ErrSysXtnMgr**
Severity	**ErrAlways**
Platforms	Macintosh

xmErrCalledObsoleteProc

An obsolete function was called.

xmErrCannotReplaceSelector

Attempt to replace an selector that cannot be replaced.

xmErrDuplicatePluginName

Two plug-ins are attempting to register with the same name.

xmErrInitializationFailed

The plug-in failed to initialize.

xmErrNoError

No error.

xmErrNoPLUGResource

The plug-in lacks a PLUG resource of ID 1 (Macintosh)

xmErrNotPrivileged

The Acrobat Reader cannot load this plug-in.

xmErrOutOfDateHFT

The plug-in was compiled with an out-of-date **HFT**.

xmErrPluginIncompatible

The plug-in is incompatible with this version of the Acrobat viewer.

xmErrPluginLoadFailed

The plug-in failed to load.

xmErrPPCOnly

Only the PowerPC Viewer can load this plug-in (Macintosh).

Macros

A4_GLOBALS

A4_GLOBALS

Description

(Macintosh only) Together with **A5_GLOBALS**, this specifies the address register off of which a plug-in references its globals. They are used only for 68xxx Macintosh plug-ins, not for PowerPC plug-ins. Either **A4_GLOBALS** or **A5_GLOBALS** must be defined to be 1, and the other undefined.

Both **A4_GLOBALS** and **A5_GLOBALS** are set automatically by **PIPrefix.h**.

Header File

PIPrefix.h

Related Macros

A5_GLOBALS

A5_GLOBALS

A5_GLOBALS

Description

(Macintosh only) Together with **A4_GLOBALS, this** specifies the address register off of which a plug-in references its globals. They are used only for 68xxx Macintosh plug-ins, not for PowerPC plug-ins. Either **A4_GLOBALS** or **A5_GLOBALS** must be defined to be 1, and the other undefined.

Both **A4_GLOBALS** and **A5_GLOBALS** are set automatically by **PIPrefix.h**.

Header File

PIPrefix.h

Related Macros

A4_GLOBALS

ACCB1

ACCB1

Description

Macro used when declaring callback functions. Its definition is platform-dependent. Use this macro in every callback function you declare.

Use **ACCB1** before the return value in a function declaration, as shown in the Example.

Header File

MacPlatform.h
WINPLTFM.H

Related Macros

ACCB2
ACCBPROTO1
ACCBPROTO2

Example

```
static ACCB1 ASAtom ACCB2 SnapZoomToolGetType(AVTool tool){
     …
}
```

ACCB2

ACCB2

Description

Macro used when declaring callback functions. Its definition is platform-dependent. Use this macro in every callback function you declare.

Use **ACCB2** after the return value in a function declaration, as shown in the Example.

Header File

MacPlatform.h
WINPLTFM.H

Related Macros

ACCB1
ACCBPROTO1
ACCBPROTO2

Example

```
static ACCB1 ASAtom ACCB2 SnapZoomToolGetType(AVTool tool){
     …
}
```

ACCBPROTO1

ACCBPROTO1

Description

Macro used when declaring function prototypes. Its definition is platform-dependent. Use this macro in every function prototype you declare.

Use **ACCBPROTO1** before the return value in a function prototype, as shown in the Example.

Header File

MacPlatform.h
WINPLTFM.H

Related Macros

ACCBPROTO2
ACCB1
ACCB2

Example

```
static ACCBPROTO1 void (ACCBPROTO2
*DrawImageSelectionCallback)(AVPageView pageView, AVRect* updateRect,
void *data);
```

ACCBPROTO2

ACCBPROTO2

Description

Macro used when declaring function prototypes. Its definition is platform-dependent. Use this macro in every function prototype you declare.

Use **ACCBPROTO2** after the return value in a function prototype, as shown in the Example.

Header File

MacPlatform.h
WINPLTFM.H

Related Macros

ACCB1
ACCB2
ACCBPROTO1

Example

```
static ACCBPROTO1 void (ACCBPROTO2
*DrawImageSelectionCallback)(AVPageView pageView, AVRect* updateRect,
void *data);
```

ASFileSysCreatePathFromCString

```
ASFileSysCreatePathFromCString(asfs, cPath)
```

Description

Helper macro for the **ASFileSysCreatePathName** method. See this method for more information.

Parameters

asfs	*(May be **NULL**)* The file system through which the **ASPathName** is obtained.
cPath	A C string containing the path for which the **ASPathName** is obtained.

Header File

ASExpT.h

Related Macros

ASFileSysCreatePathFromDIPath
ASFileSysCreatePathFromFSSpec
ASFileSysCreatePathWithFolderName

Related Methods

None

ASFileSysCreatePathFromDIPath

```
ASFileSysCreatePathFromDIPath(asfs, cDIPath, aspRelativeTo)
```

Description

Helper macro for the **ASFileSysCreatePathName** method. See this method for more information.

Parameters

asfs	*(May be **NULL**)* The file system through which the **ASPathName** is obtained.
cDIPath	A C string containing the device-independent path for which the **ASPathName** is obtained.
aspRelativeTo	*(May be **NULL**)* An **ASPathName** that **cDIPath** will be evaluated against if it contains a relative path.

Header File

ASExpT.h

Related Macros

ASFileSysCreatePathFromCString
ASFileSysCreatePathFromFSSpec
ASFileSysCreatePathWithFolderName

Related Methods

None

ASFileSysCreatePathFromFSSpec

```
ASFileSysCreatePathFromFSSpec(asfs, cPath)
```

Description

Helper macro for the **ASFileSysCreatePathName** method. See this method for more information.

Parameters

asfs	*(May be **NULL**)* The file system through which the **ASPathName** is obtained.
cPath	The FSSpec for which the **ASPathName** is obtained.

Header File

ASExpT.h

Related Macros

ASFileSysCreatePathFromCString
ASFileSysCreatePathFromDIPath
ASFileSysCreatePathWithFolderName

Related Methods

None

ASFileSysCreatePathWithFolderName

```
ASFileSysCreatePathWithFolderName(asfs, aspFolder, cFileName)
```

Description

Helper macro for the **ASFileSysCreatePathName** method. See this method for more information.

Parameters

asfs	*(May be **NULL**)* The file system through which the **ASPathName** is obtained.
aspFolder	**ASPathName** contained the path of the folder.
cFileName	A C string containing the name of the file. The returned **ASPathName** contains the result of appending **cFileName** to **aspFolder**.

Header File

ASExpT.h

Related Macros

ASFileSysCreatePathFromCString
ASFileSysCreatePathFromDIPath
ASFileSysCreatePathFromFSSpec

Related Methods

None

ASFixedRoundToInt16

ASFixedRoundToInt16(f)

Description

Converts a fixed point number to an **ASInt16**, rounding the result.

Parameters

f	The fixed point number to convert.

Header File

ASExpT.h

Related Macros

Fixed Numbers
ASFixedRoundToInt32
ASFixedToFloat
ASFixedTruncToInt16
ASFixedTruncToInt32
ASFloatToFixed
ASInt16ToFixed
ASInt32ToFixed

ASFixedRoundToInt32

ASFixedRoundToInt32(f)

Description

Converts a fixed point number to an **ASInt32**, rounding the result.

Parameters

f	The fixed point number to convert.

Header File

ASExpT.h

Related Macros

Fixed Numbers
ASFixedRoundToInt16
ASFixedToFloat
ASFixedTruncToInt16
ASFixedTruncToInt32
ASFloatToFixed
ASInt16ToFixed
ASInt32ToFixed

ASFixedToFloat

```
FixedToFloat(f)
```

Description

Converts a fixed point number to a floating point number.

Parameters

f	The fixed point number to convert.

Header File

ASExpT.h

Related Macros

Fixed Numbers
ASFixedRoundToInt16
ASFixedRoundToInt32
ASFixedTruncToInt16
ASFixedTruncToInt32
ASFloatToFixed
ASInt16ToFixed
ASInt32ToFixed

ASFixedTruncToInt16

ASFixedTruncToInt16(f)

Description

Converts a fixed point number to an **ASInt16**, truncating the result.

Parameters

f	The fixed point number to convert.

Header File

ASExpT.h

Related Macros

Fixed Numbers
ASFixedRoundToInt16
ASFixedRoundToInt32
ASFixedToFloat
ASFixedTruncToInt32
ASFloatToFixed
ASInt16ToFixed
ASInt32ToFixed

ASFixedTruncToInt32

ASFixedTruncToInt32(f)

Description

Converts a fixed point number to an **ASInt32**, truncating the result.

Parameters

f	The fixed point number to convert.

Header File

ASExpT.h

Related Macros

Fixed Numbers
ASFixedRoundToInt16
ASFixedRoundToInt32
ASFixedToFloat
ASFixedTruncToInt16
ASFloatToFixed
ASInt16ToFixed
ASInt32ToFixed

ASFloatToFixed

```
FloatToFixed(f)
```

Description

Converts a floating point number to a fixed point number.

Parameters

f	The floating point number to convert.

Header File

ASExpT.h

Related Macros

Fixed Numbers
ASFixedRoundToInt16
ASFixedRoundToInt32
ASFixedToFloat
ASFixedTruncToInt16
ASFixedTruncToInt32
ASInt16ToFixed
ASInt32ToFixed

ASInt16ToFixed

```
ASInt16ToFixed(i)
```

Description

Converts an **ASInt16** to a fixed point number.

Parameters

i	The **ASInt16** to convert.

Header File

ASExpT.h

Related Macros

Fixed Numbers
ASFixedRoundToInt16
ASFixedRoundToInt32
ASFixedToFloat
ASFixedTruncToInt16
ASFixedTruncToInt32
ASFloatToFixed
ASInt32ToFixed

ASInt32ToFixed

ASInt32ToFixed(i)

Description

Converts an **ASInt32** to a fixed point number.

Parameters

i	The **ASInt32** to convert.

Header File

ASExpT.h

Related Macros

Fixed Numbers
ASFixedRoundToInt16
ASFixedRoundToInt32
ASFixedToFloat
ASFixedTruncToInt16
ASFixedTruncToInt32
ASFloatToFixed
ASFixedToFloat

CALL_REPLACED_PROC

```
CALL_REPLACED_PROC(hft, sel, replacer)(args...)
```

Description

Calls the previous implementation of a replaced method (that is, the code that would have been executed before the method was replaced using **REPLACE**).

Parameters

hft	The **HFT** containing the replaced method to execute, for example, **gAcroViewHFT**. See **HFTs** for a list of the Acrobat viewer's built-in **HFT**s.
sel	The selector for the replaced method to execute. The name must have the characters **SEL** appended, for example, **AVAlertSEL**.
replacer	The callback whose previous implementation is called. Recall that a method may be replaced more than once, and all replacements for a particular method are kept in a linked list. **proc** must be an element in that linked list, and the entry before **proc** is the one that is called.
args...	The argument list to pass to the procedure being called.

Header File

ASCalls.h

Related Macros

REPLACE

Related Methods

HFTGetReplacedEntry

Example

```
CALL_REPLACED_PROC(gAcroViewHFT, AVAlertSEL, myAlertCallback)(iconType,
gsm, button1, button2, button3, beep);
```

CastToPDAnnot

```
CastToPDAnnot(a)
```

Description

Casts a link annotation or a text annotation to a generic annotation.

Parameters

a	The link annotation or text annotation to cast.

Header File

PDExpT.h

Related Macros

CastToPDLinkAnnot
CastToPDTextAnnot

CastToPDLinkAnnot

```
CastToPDLinkAnnot(a)
```

Description

Casts a generic annotation or a text annotation to a link annotation.

Parameters

a	The generic annotation or text annotation to cast.

Header File

PDExpT.h

Related Macros

CastToPDAnnot
CastToPDTextAnnot

CastToPDTextAnnot

```
CastToPDTextAnnot(a)
```

Description

Casts a link annotation or a generic annotation to a text annotation.

Parameters

a	The link annotation or generic annotation to cast.

Header File

PDExpT.h

Related Macros

CastToPDAnnot
CastToPDLinkAnnot

DEBUG

DEBUG

Description

Enables and disables compile-time type-checking in various declarations.

Define DEBUG as 1 to enable type-checking (when developing and testing plug-ins) and as 0 to disable type-checking (before shipping your plug-in).

Header File

MacPlatform.h
WINPLTFM.H

Related Macros

ASCallbackCreateNotification
ASCallbackCreateProto
ASCallbackCreateReplacement

Example

```
#define DEBUG 1
```

DURING

DURING

Description

Begins the section of code where Acrobat APIs may throw an exception. After calling an Acrobat API method, execution may jump into the **HANDLER** clause. This macro is similar to the **TRY** clause in the C++ language.

Header File

CorCalls.h

Related Macros

END_HANDLER
E_RETURN
E_RTRN_VOID
HANDLER

END_HANDLER

END_HANDLER

Description

Ends a DURING/HANDLER/END_HANDLER clause.

Header File

CorCalls.h

Related Macros

DURING
E_RETURN
E_RTRN_VOID
HANDLER

E_RETURN

E_RETURN

Description

Returns a value from an enclosing function when nested inside a DURING/HANDLER clause.

Header File

CorCalls.h

Related Macros

DURING
END_HANDLER
E_RTRN_VOID
HANDLER

ERRORCODE

ERRORCODE

Description

Macro defined to call **ASGetExceptionErrorCode**. Returns an **ASInt32** containing exception error code. See **Errors** for a list of predefined exceptions.

Header File

CorCalls.h

Related Macros

DURING
END_HANDLER
E_RETURN
HANDLER

E_RTRN_VOID

E_RTRN_VOID

Description

Returns from an enclosing function when nested inside a DURING/HANDLER clause, without returning a value.

Header File

CorCalls.h

Related Macros

ErrGetCode
ErrGetSeverity
ErrGetSignedCode
ErrGetSystem

ErrBuildCode

```
ErrBuildCode(xseverity, xsys, xerror)
```

Description

Builds an error code for the specified severity, system, and error number. Error codes are used in exception handling. The **ASRaise** method takes an error code for its argument; **ASRegisterErrorString** returns an error code.

An error code has three components:

- Severity: none, warning, severe; 4 bits
- System: Cos, **PDDoc**, and so on; 8 bits
- Error: FileOpen, Syntax, and so on; 16 bits

Parameters

xseverity	Severity of the error. One of **Severities.**
xsys	Error system. Must be one of **Error Systems**.
xerror	Error number in the error system, **xsys.**

Header File

AcroErr.h

Related Macros

ErrGetCode
ErrGetSeverity
ErrGetSignedCode
ErrGetSystem

Related Methods

ASRaise
ASRegisterErrorString

Example

```
myErrorCode = ErrBuildCode(ErrAlways, ErrSysAcroView,
avErrActionRestricted);
```

ErrGetCode

```
ErrGetCode(xcode)
```

Description

Gets the error number from an error code.

Parameters

xcode	Error code.

Header File

AcroErr.h

Related Macros

ErrBuildCode
ErrGetSeverity
ErrGetSignedCode
ErrGetSystem

Related Methods

ASGetErrorString
ASGetExceptionErrorCode
ASRegisterErrorString

Example

```
errorNumber = ErrGetCode(errorCode);
```

ErrGetSeverity

```
ErrGetSeverity(xcode)
```

Description

Gets the error severity from an error code. Returns one of **Severities**.

Parameters

xcode	Error code.

Header File

AcroErr.h

Related Macros

ErrBuildCode
ErrGetCode
ErrGetSignedCode
ErrGetSystem

Related Methods

ASGetErrorString
ASGetExceptionErrorCode
ASRegisterErrorString

Example

```
errorSeverity = ErrGetSeverity(errorCode);
```

ErrGetSignedCode

```
ErrGetSignedCode(xcode)
```

Description

Gets a signed error number from an error code.

Parameters

xcode	Error code.

Header File

AcroErr.h

Related Macros

ErrBuildCode
ErrGetCode
ErrGetSeverity
ErrGetSystem

Related Methods

ASGetErrorString
ASGetExceptionErrorCode
ASRegisterErrorString

Example

```
errorSignedNumber = ErrGetSignedCode(errorCode);
```

ErrGetSystem

```
ErrGetSystem(xcode)
```

Description

Gets the error system from an error code. Returns one of **Error Systems**.

Parameters

xcode	Error code.

Header File

AcroErr.h

Related Macros

ErrBuildCode
ErrGetCode
ErrGetSeverity
ErrGetSignedCode

Related Methods

ASGetErrorString
ASGetExceptionErrorCode
ASRegisterErrorString

Example

```
errorSystem = ErrGetSystem(errorCode);
```

Fixed Numbers

Description

A variety of predefined fixed-point constants.

fixedZero	**fixedFive**
fixedHundredth	**fixedSix**
fixedSixteenth	**fixedSeven**
fixedTenth	**fixedEight**
fixedEighth	**fixedNine**
fixedQuarter	**fixedTen**
fixedHalf	**fixedEleven**
fixedThreeQuarters	**fixedTwelve**
fixedPi4	**fixedSixteen**
fixedSevenEighths	**fixedThirtyTwo**
fixedOne1	**fixedFifty**
fixedOne	**fixedSeventyTwo**
fixedOneAndQuarter	**fixedNinety**
fixedFourThirds	**fixedHundred**
fixedSqrtTwo	**fixedHundredFifty**
fixedThreeHalves	**fixedOneEighty**
fixedOneAnd3Qtr	**fixedTwoSeventy**
fixedPi2	**fixedFiveHundred**
fixedGolden	**fixedThousand**
fixedTwo	**fixedTenThousand**
fixedThree	**fixedNegativeInfinity**
fixedFour	**fixedPositiveInfinity**

Header File

ASExpT.h

Related Macros

ASFixedTruncToInt16
ASFixedTruncToInt32
ASFixedRoundToInt16
ASFixedRoundToInt32
ASInt16ToFixed
ASInt32ToFixed
ASFixedToFloat
ASFloatToFixed

HANDLER

HANDLER

Description

Follows a DURING macro. Code inserted between HANDLER and END_HANDLER macros will be executed only if an Acrobat function or other function THROWs. This macro is similar to the CATCH clause in the C++ language.

Header File

CorCalls.h

Related Macros

DURING
END_HANDLER
E_RETURN
E_RTRN_VOID

MAC_PLATFORM

MAC_PLATFORM

Description

(Macintosh only, previously known as MAC_ENV) Defined if the plug-in is being compiled for a Macintosh, undefined otherwise. **MAC_PLATFORM**, **WIN_PLATFORM**, and **UNIX_PLATFORM** should be used by plug-in developers to conditionally compile platform-dependent code.

MAC_PLATFORM is automatically set by the header files.

Header File

Environ.h (based on a value set in MacPlatform.h)

Related Macros

UNIX_PLATFORM
WIN_PLATFORM

MAC68K

MAC68K

Description

(Macintosh only) Together with **POWER_PC**, specifies which processor architecture a plug-in is targeted for. Either **POWER_PC** or **MAC68K** must be defined as 1, the other as 0.

POWER_PC and **MAC68K** are automatically set by **PIPrefix.h**.

Header File

PIPrefix.h

Related Macros

POWER_PC

PI_ACROSUPPORT_VERSION

PI_ACROSUPPORT_VERSION

Description

Specifies the version of the Acrobat support level **HFT**.

This is automatically set by **PIRequir.h**.

Header File

PIRequir.h

Errors

If the **HFT** version is higher that the viewer loading the plug-in supports, it displays an alert box with the message “There was an error while loading the plug-in '<plug-in name>'. The plug-in is incompatible with this version of the Viewer.”

Related Macros

PI_ACROVIEW_VERSION
PI_CORE_VERSION
PI_COS_VERSION
PI_MACINTOSH_VERSION
PI_PDMODEL_VERSION
PI_UNIX_VERSION
PI_WIN_VERSION

PI_ACROVIEW_VERSION

PI_ACROVIEW_VERSION

Description

Specifies the version of the Acrobat viewer level **HFT**.

This is automatically set by **PIRequir.h**.

Header File

PIRequir.h

Errors

If the **HFT** version is higher that the viewer loading the plug-in supports, it displays an alert box with the message “There was an error while loading the plug-in '<plug-in name>'. The plug-in is incompatible with this version of the Viewer.”

Related Macros

PI_ACROSUPPORT_VERSION
PI_CORE_VERSION
PI_COS_VERSION
PI_MACINTOSH_VERSION
PI_PDMODEL_VERSION
PI_UNIX_VERSION
PI_WIN_VERSION

PI_CORE_VERSION

PI_CORE_VERSION

Description

Specifies the version of the **HFT**.

This is automatically set by **PIRequir.h**.

Header File

PIRequir.h

Errors

If the **HFT** version is higher that the viewer loading the plug-in supports, it displays an alert box with the message “There was an error while loading the plug-in '<plug-in name>'. The plug-in is incompatible with this version of the viewer.”

Related Macros

PI_ACROSUPPORT_VERSION
PI_ACROVIEW_VERSION
PI_COS_VERSION
PI_MACINTOSH_VERSION
PI_PDMODEL_VERSION
PI_UNIX_VERSION
PI_WIN_VERSION

PI_COS_VERSION

PI_COS_VERSION

Description

Specifies the version of the Cos level **HFT**.

This is automatically set by **PIRequir.h**.

Header File

PIRequir.h

Errors

If the **HFT** version is higher that the viewer loading the plug-in supports, it displays an alert box with the message “There was an error while loading the plug-in '<plug-in name>'. The plug-in is incompatible with this version of the Viewer.”

Related Macros

PI_ACROSUPPORT_VERSION
PI_ACROVIEW_VERSION
PI_CORE_VERSION
PI_MACINTOSH_VERSION
PI_PDMODEL_VERSION
PI_UNIX_VERSION
PI_WIN_VERSION

PI_MACINTOSH_VERSION

PI_MACINTOSH_VERSION

Description

Specifies the version of the Macintosh-only methods **HFT**.

This is automatically set by **PIRequir.h**.

Header File

PIRequir.h

Errors

If the **HFT** version is higher that the viewer loading the plug-in supports, it displays an alert box with the message “There was an error while loading the plug-in '<plug-in name>'. The plug-in is incompatible with this version of the Viewer.”

Related Macros

PI_ACROSUPPORT_VERSION
PI_ACROVIEW_VERSION
PI_CORE_VERSION
PI_COS_VERSION
PI_PDMODEL_VERSION
PI_UNIX_VERSION
PI_WIN_VERSION

PI_PDMODEL_VERSION

PI_PDMODEL_VERSION

Description

Specifies the version of the PD level **HFT**.

This is automatically set by **PIRequir.h**.

Header File

PIRequir.h

Errors

If the **HFT** version is higher that the viewer loading the plug-in supports, it displays an alert box with the message “There was an error while loading the plug-in '<plug-in name>'. The plug-in is incompatible with this version of the Viewer.”

Related Macros

PI_ACROSUPPORT_VERSION
PI_ACROVIEW_VERSION
PI_CORE_VERSION
PI_COS_VERSION
PI_MACINTOSH_VERSION
PI_UNIX_VERSION
PI_WIN_VERSION

PI_UNIX_VERSION

PI_UNIX_VERSION

Description

Specifies the version of the UNIX-only methods **HFT**.

This is automatically set by **PIRequir.h**.

Header File

PIRequir.h

Errors

If the **HFT** version is higher that the viewer loading the plug-in supports, it displays an alert box with the message “There was an error while loading the plug-in '<plug-in name>'. The plug-in is incompatible with this version of the Viewer.”

Related Macros

PI_ACROSUPPORT_VERSION
PI_ACROVIEW_VERSION
PI_CORE_VERSION
PI_COS_VERSION
PI_MACINTOSH_VERSION
PI_PDMODEL_VERSION
PI_WIN_VERSION

PI_WIN_VERSION

PI_WIN_VERSION

Description

Specifies the version of the Windows-only methods **HFT**.

This is automatically set by **PIRequir.h**.

Header File

PIRequir.h

Errors

If the **HFT** version is higher that the viewer loading the plug-in supports, it displays an alert box with the message “There was an error while loading the plug-in '<plug-in name>'. The plug-in is incompatible with this version of the Viewer.”

Related Macros

PI_ACROSUPPORT_VERSION
PI_ACROVIEW_VERSION
PI_CORE_VERSION
PI_COS_VERSION
PI_MACINTOSH_VERSION
PI_PDMODEL_VERSION
PI_UNIX_VERSION

PLATFORM

PLATFORM

Description

Defines the platform-specific header file. Must be **"MacPlatform.h"** in Mac OS, **"WINPLTFM.H"** in Windows.

PLATFORM is automatically set by the header file.

Header File

PIPrefix.h (*Macintosh*)
ENVIRON.H *(Windows)*

POWER_PC

POWER_PC

Description

(Macintosh only) Together with **MAC68K**, specifies which processor architecture a plug-in is targeted for. Either **POWER_PC** or **MAC68K** must be defined as 1, the other as 0.

POWER_PC and **MAC68K** are automatically set by **PIPrefix.h**.

Header File

PIPrefix.h

Related Macros

MAC68K

PRODUCT

PRODUCT

Description

Defines the platform-specific header file. Must be "**Plugin.h**" in Mac OS and Windows.

PRODUCT is automatically set by the header file.

Header File

PIPrefix.h (Macintosh)
ENVIRON.H (Windows)

REGISTER_NOTIFICATION

```
REGISTER_NOTIFICATION(nselName, proc, rock)
```

Description

Macro to register a notification. Uses **AVAppRegisterNotification**.

Header File

PICommon.h

REPLACE

```
REPLACE(hft, sel, proc)
```

Description

Replaces one of the Acrobat viewer's built-in methods. The method being replaced must be one of the **Replaceable Methods**. The method's **HFTEntryReplaceable** flag is automatically set, allowing it to be subsequently replaced.

All plug-ins, and the Acrobat viewer itself, share a single copy of each **HFT**. As a result, when a plug-in replaces the implementation of a method, all other plug-ins and the Acrobat viewer also use the new implementation of that method. In addition, once a method's implementation has been replaced, there is no way to remove the new implementation without restarting the Acrobat viewer.

NOTE: The **CALL_REPLACED_PROC** macro is available to call the previous HFT entry function that was replaced.

Parameters

hft	The **HFT** containing the method to replace, for example, **gAcroViewHFT**. See **HFTs** for a list of the Acrobat viewer's built-in **HFT**s.
sel	The selector for the method to replace. The name must have the characters **SEL** appended, for example, **AVAlertSEL**.
proc	A callback containing the replacement method. The callback must have been created using **ASCallbackCreateReplacement**.

Header File

PICommon.h

Related Macros

ASCallbackCreateReplacement
CALL_REPLACED_PROC

Related Methods

HFTReplaceEntry

Examples

```
myAlertCallback = ASCallbackCreateReplacement(AVAlertSEL, myAlert);
     REPLACE(gAcroViewHFT, AVAlertSEL, myAlertCallback);
```

RERAISE

RERAISE

Description

Re-raises the most recently raised exception and passes it to the next exception handler in the stack.

Parameters

None

Header File

CorCalls.h

Related Macros

ErrGetCode
ErrGetSeverity
ErrGetSignedCode
ErrGetSystem

Related Methods

ASRaise

UNIX_PLATFORM

UNIX_PLATFORM

Description

(UNIX only) Defined if the plug-in is being compiled for a UNIX platform, undefined otherwise. **MAC_PLATFORM**, **WIN_PLATFORM**, and **UNIX_PLATFORM** should be used by plug-in developers to conditionally compile platform-dependent code.

UNIX_PLATFORM must be defined in the arguments to the C compiler. The make files for the sample plug-ins in the Acrobat SDK do this automatically.

Header File

Environ.h (based on a value set in UNIXPlatform.h)

Related Macros

MAC_PLATFORM
WIN_PLATFORM

WIN_PLATFORM

WIN_PLATFORM

Description

(Windows only, previously known as WIN_ENV) Defined if the plug-in is being compiled for a Windows machine, undefined otherwise. **MAC_PLATFORM**, **WIN_PLATFORM**, and **UNIX_PLATFORM** should be used by plug-in developers to conditionally compile platform-dependent code.

WIN_PLATFORM must be defined in the arguments to the C compiler. The make files for the sample plug-ins in the Acrobat SDK do this automatically.

Header File

Environ.**h** (based on a value set in WinPltfm.h)

Related Macros

MAC_PLATFORM
UNIX_PLATFORM

API Changes

Version 2.1

Methods

The following methods were added in version 2.1.

Available only if **PI_ACROVIEW_VERSION** (in **PIRequir.h**) is set to 0x00020001 or higher.

AVDocGetClientName
AVDocGetPageText
AVDocSetClientName

Available only if **PI_PDMODEL_VERSION** (in **PIRequir.h**) is set to 0x00020001 or higher.

PDDocClearFlags
PDDrawCosObjToWindow
PDPageNotifyContentsDidChangeEx

Errors

The following errors were added in version 2.1.

xmErrPluginLoadFailed
xmErrNotPrivileged
xmErr68KOnly
xmErrPPCOnly
avErrNoText

Notifications

The following notifications were added in version 2.1.

PDPageContentsDidChangeEx

Version 3.0

Objects

The following object was added in version 3.0.

PDTrans

Methods

The following methods were added in version 3.0.

Available only if **PI_ACROSUPPORT_VERSION** (in **PIRequir.h**) is set to 0x00020002 or higher.

ASFileFromMDFile
ASFileGetFileSysByName
ASFileGetMDFile
ASFilePushData
ASFileRegisterFileSys
ASFileSetMode
ASFileSysAcquireFileSysPath
ASFileSysCreatePathName
ASFileUnregisterFileSys

Available only if **PI_ACROVIEW_VERSION** (in **PIRequir.h**) is set to 0x00020002 or higher.

AVAppEnumTransHandlers
AVAppGetTransHandlerByType
AVAppHandlePlatformEvent
AVAppRegisterTransHandler
AVAuthOpen
AVDocDoActionPropsDialog
AVDocDoSaveAs
AVDocGetViewDef
AVDocIsExternal
AVDocOpenFromASFileWithParams
AVDocPrintPagesWithParams
AVDocSendAuxData
AVDocSetDead
AVDocSetViewDef
AVHasAuxDataHandler
AVPageViewDrawCosObj
AVPageViewGetFirstVisiblePageNum
AVPageViewGetLastVisiblePageNum
AVPageViewGetLayoutMode
AVPageViewGetNextView
AVPageViewGetSelectedAnnotPageNum
AVPageViewHighlightText
AVPageViewInsetRect

AVPageViewInvalidateText
AVPageViewPageNumIsVisible
AVPageViewPointInText
AVPageViewSetLayoutMode
AVPageViewTrackText
AVPageViewSetPageNum
AVPageViewUseThisDestination
AVRegisterAuxDataHandler
AVToolButtonSetExternal
AVToolButtonSetHelpText
AVUnregisterAuxDataHandler
AVWindowGetCursorAtPoint
AVWindowHandlePlatformEvent

Available only if **PI_MACINTOSH_VERSION** (in **PIRequir.h**) is set to 0x00020002 or higher.

AVAppEnumSystemFonts

Available only if **PI_COS_VERSION** (in **PIRequir.h**) is set to 0x00020002 or higher.

CosDocClose
CosDocCreate
CosDocOpenWithParams
CosDocSaveToFile
CosDocSetDirty

Available only if **PI_PDMODEL_VERSION** (in **PIRequir.h**) is set to 0x00020002 or higher.

PDDocGetCryptHandlerClientData
PDDocGetFullScreen
PDDocOpenEx
PDDocOpenFromASFile
PDDocOpenFromASFileEx
PDDocReadAhead
PDDocSaveWithParams
PDDocSetFullScreen
PDFileSpecGetDoc
PDFileSpecGetFileSysName
PDNameTreeLookup
PDPageGetDuration
PDPageGetTransition
PDPageHasTransition
PDPageSetDuration
PDPageSetTransition
PDPageStmGetInlineImage
PDPageStmGetToken
PDRegisterCryptHandlerEx
PDRegisterFileSpecHandlerByName

PDTransEqual
PDTransFromCosObj
PDTransGetCosObj
PDTransGetDuration
PDTransGetSubtype
PDTransNew
PDTransNewFromCosDoc
PDTransNull
PDTransIsValid
PDViewDestResolve

Available only if **PI_WIN_VERSION** (in **PIRequir.h**) is set to 0x00020000 or higher.

WinAppEnableIdleTimer
WinAppGetModalParent
WinAppGetPalette
WinAppRegisterModelessDialog
WinAppUnRegisterModelessDialog

The following methods were added to the Acrobat Toolkit.

ASGetErrorString
ASfree
ASmalloc
ASrealloc
CosDictPut
CosDictRemove
CosNewString
PDDocAuthorize
PDDocCreate
PDDocInsertPages
PDDocSaveWithParams
PDFontAcquireXlateTable
PDFontXlateTableRelease
PDFontXlateString
PDFontXlateWidths
PDPageGetDoc
PDRegisterCryptHandler
PDXlateToPDFDocEnc

The following methods are now replaceable.

AVDocDoSaveAs
AVPageViewGetNextView
PDDocSave
PDDocSaveWithParams

Callbacks

The following callbacks were added in version 3.0.

ASFileCompletionProc
ASFileSysAcquireFileSysPathProc
ASFileSysAsyncAbortProc
ASFileSysAsyncReadProc
ASFileSysAsyncWriteProc
ASFileSysClearOutstandingMReadsProc
ASFileSysCreatePathNameProc
ASFileSysGetFileFlags
ASFileSysGetStatusProc
ASFileSysMReadRequestProc
ASFileSysYieldProc
ASIODoneProc
ASMemFreeProc
AVAnnotHandlerCursorEnterProc
AVAnnotHandlerCursorExitProc
AVAuxDataPerformProc
AVTransHandlerCompleteTransDictProc
AVTransHandlerDoPropertiesProc
AVTransHandlerEnumProc
AVTransHandlerExecuteProc
AVTransHandlerGetButtonTextProc
AVTransHandlerGetInstructionsProc
AVTransHandlerGetStringOneTextProc
AVTransHandlerGetStringTwoTextProc
AVTransHandlerGetTypeProc
AVTransHandlerGetItemUINameProc
AVTransHandlerGetUINameProc
AVTransHandlerInitTransDictProc
PDAuthProcEx
PDCryptFreeAuthDataProc
PDCryptFreeSecurityDataProc
PDLaunchActionProc
PDPageStmImageDataProc
PDPageStmStringOverflowProc

Data

The following data structures were added in version 3.0.

ASFile Flags
ASFile Open Modes (**ASFILE_SERIAL** and **ASFILE_LOCAL**)
ASFileStatus Flags
ASFileSysRec (significantly expanded)
ASIORequest
ASPlatformPrinterSpec
AVAnnotHandler (new callbacks)
AVAuxDataHandler
AVDocOpenParams (significantly expanded)

AVDocPrintParams
AVDocViewDef
AVPrefsType (significantly expanded)
AVSystemFont
AVSystemFont Flags
AVTransHandler
AVTransitionPort
CosDocCreate Flags
CosDocSave Flags
CosDocSaveParams
EmitFontOptions
Emit Flags
Page Specification
PDCryptHandler (new callbacks)
PDDocReadAhead Flags
PDLayoutMode
PDPageStmToken
Predefined Cursors (cursors added)
Tool Button Flags
Transition Duration

Errors

The following error system was added in version 3.0.

ErrSysXtn

The following errors were added in version 3.0.

cfMacGenPSErr
cfMaciPrSavPFil
cfMacServerLostConnection
cosErrBadIndex
cosErrCancelSave
cosErrOldLinFormat
cosErrTempTooShort
cosSynErrBadLinearized
fileErrBytesNotReady
fileErrUserRequestedStop
fileErrIOTimeout
fsErrBadParameter
fsErrDownloadAborted
fsErrDownloadFailed
pageErrBadColorSpace
pageErrBadEGS
pageErrBadPattern
pageErrEGStateNotFound
pageErrMissingKey
pageErrMissingResource
pageErrPatternNotFound

pageErrPatternTypeNotAvailable
pdErrATMMemory
pdErrBadCMap
pdErrCancelSave
pdErrCannotReopenDoc
pdErrOldATMVersion
pdErrOptMemory
pdErrTextStringTooShort
pdErrZeroPageFile

Notifications

The following notifications were added in version 3.0.

Available only if **PI_ACROVIEW_VERSION** (in **PIRequir.h**) is set to 0x00020002 or higher.

AVDocDidAddToSelection
AVDocWantsToDie
AVDocWillOpenFromPDDoc
PDDocWillPrintDoc
PDDocWillSaveEx

Miscellaneous

Values of some types in methods, callbacks, and data have been changed for improved cross-platform portability.

Previous name	New name
boolean	**ASBool**
Int8	**ASInt8**
Int16	**ASInt16**
Int32	**ASInt32**
Uns8	**ASUns8**
Uns16	**ASUns16**
Uns32	**ASUns32**

Version 3.0J

Methods

The following methods were added in version 3.0J.

Available only if **PI_PDMODEL_VERSION** (in **PIRequir.h**) is set to 0x00020003 or higher.

PDGetHostEncoding
PDHostMBLen
PDXlateToHostEx
PDXlateToPDFDocEncEx
PDDocCreateWordFinderUCS
PDFontGetCIDSystemInfo
PDFontGetCIDSystemSupplement
PDFontGetDescendant
PDFontGetEncodingName
PDFontXlateToHost
PDFontXlateToUCS

The following methods have new behavior in version 3.0J.

PDWordFilterString
PDWordGetString
PDWordSplitString

Version 3.01

Methods

The following methods were added in version 3.01.

Available only if **PI_ACROVIEW_VERSION** (in **PIRequir.h**) is set to 0x00020003 or higher.

AVDestInfoDestroy
AVDocCopyAction
AVDocCopyActionCommon
AVDocCopyAdditionalActions
AVDocCopyAnnot
AVDocCopyAnnotCommon
AVDocDoCopyAs
AVPageViewDrawCosObjEx
AVPageViewToDestInfo
AVPageViewUseDestInfo

Callbacks

The following callbacks were added in version 3.01.

AVActionCopyProc
AVAnnotHandlerCopyProc
CrossDocLinkWithDestProc

Data

The following data structures were added or changed in version 3.01.

AVAnnotHandler (new flag)
AVDestInfo
EmitFontOptions (obsoleted and new flags)
ExternalDocServerCreationData (new callback and data)

Errors

The following errors were added in version 3.01.

avErrBadActionCopy
avErrBadAnnotationCopy

Adobe PDF Library, Version 1.0

All API elements listed here are available only if the Adobe PDF Library Version is 1.0 or later. This version adds the PDFEdit methods.

Objects

The following objects were added for PDFEdit.

PDEClip
PDEColorSpace
PDEContainer
PDEContent
PDEElement
PDEExtGState
PDEFont
PDEForm
PDEImage
PDEObject
PDEPath
PDEPattern
PDEPlace
PDEText
PDEXObject
PDSysFont

Methods

The following methods were added for the Adobe PDF Library.

PDDocPrintPages
PDFLInit
PDFLPrintDoc
PDFLTerm
AVExtensionMgrRegisterNotification
AVExtensionMgrUnregisterNotification
PDSetHostEncoding

The following methods were added for PDFEdit.

PDELogDump
PDEObjectDump
PDEAttrEnumTable
PDEDefaultGState
PDEEnumElements
PDEMergeResourcesDict
PDEClipAddElem
PDEClipCreate
PDEClipGetElem
PDEClipGetNumElems
PDEClipRemoveElems

PDEColorSpaceCreate
PDEColorSpaceCreateFromName
PDEColorSpaceGetBase
PDEColorSpaceGetBaseNumComps
PDEColorSpaceGetCosObj
PDEColorSpaceGetCTable
PDEColorSpaceGetHiVal
PDEColorSpaceGetName
PDEColorSpaceGetNumComps
PDEContainerCreate
PDEContainerGetContent
PDEContainerGetDict
PDEContainerGetMCTag
PDEContainerSetContent
PDEContainerSetDict
PDEContainerSetMCTag
PDEContentAddElem
PDEContentCreate
PDEContentCreateFromCosObj
PDEContentGetAttrs
PDEContentGetElem
PDEContentGetNumElems
PDEContentGetResources
PDEContentRemoveElem
PDEContentToCosObj
PDEElementCopy
PDEElementGetBBox
PDEElementGetClip
PDEElementGetGState
PDEElementGetMatrix
PDEElementSetGState
PDEElementSetMatrix
PDEExtGStateCreate
PDEExtGStateGetCosObj
PDEFontCreate
PDEFontCreateFromCosObj
PDEFontCreateFromSysFont
PDEFontCreateWithParams
PDEFontGetCosObj
PDEFontGetNumCodeBytes
PDEFontSubsetNow
PDFindSysFontForPDEFont
PDEShadingCreateFromCosObj
PDEFormGetContent
PDEFormGetCosObj
PDEImageCreate
PDEImageCreateFromCosObj

PDEImageDataIsEncoded
PDEImageGetAttrs
PDEImageGetColorSpace
PDEImageGetCosObj
PDEImageGetData
PDEImageGetDataLen
PDEImageGetDataStm
PDEImageGetFilterArray
PDEImageIsCosObj
PDEImageSetData
PDEImageSetDataStm
PDEAcquire
PDEAddTag
PDEGetTag
PDEObjectGetType
PDERelease
PDERemoveTag
PDEPathAddSegment
PDEPathCreate
PDEPathGetData
PDEPathGetPaintOp
PDEPathSetData
PDEPathSetPaintOp
PDEPatternCreate
PDEPatternGetCosObj
PDEPlaceCreate
PDEPlaceGetDict
PDEPlaceGetMCTag
PDEPlaceSetDict
PDEPlaceSetMCTag
PDETextAdd
PDETextCreate
PDETextGetAdvanceWidth
PDETextGetBBox
PDETextGetFont
PDETextGetGState
PDETextGetNumBytes
PDETextGetNumRuns
PDETextGetQuad
PDETextGetRunForChar
PDETextGetStrokeMatrix
PDETextGetText
PDETextGetTextMatrix
PDETextGetTextState
PDETextIsAtPoint
PDETextReplaceChars
PDETextRunGetCharOffset

PDETextRunGetNumChars
PDETextRunSetFont
PDETextRunSetGState
PDETextRunSetStrokeMatrix
PDETextRunSetTextMatrix
PDETextRunSetTextState
PDETextSplitRunAt
PDEXObjectCreate
PDEXObjectGetCosObj
PDEnumSysFonts
PDFindSysFont
PDPageAcquirePDEContent
PDPageGetPDEContentFilters
PDPageGetPDEContentFlags
PDPagePDEContentWasChanged
PDPageRegisterForPDEContentChanged
PDPageRegisterForPDEContentNotCached
PDPageReleasePDEContent
PDPageSetPDEContent
PDPageSetPDEContentFilters
PDPageSetPDEContentFlags
PDPageSuspendPDEContentChanged
PDPageUnRegisterForPDEContentNotCached
PDSysFontAcquirePlatformData
PDSysFontGetEncoding
PDSysFontGetInfo
PDSysFontGetName
PDSysFontGetType0Widths

Callbacks

The following callbacks were added for PDFEdit.

PDEAttrEnumProc
PDEElementEnumProc
PDEObjectDumpProc
PDSysFontEnumProc

Data

The following data structures were added, mostly for PDFEdit.

PDFLData (for Adobe PDF Library)
PDEColorSpec
PDEColorValue
PDEContentAttrs
PDEContentFlags
PDEContentToCosObjFlags
PDEDash
PDEElementCopyFlags

PDEEnumElementsFlags
PDEFilterArray
PDEFilterSpec
PDEFontAttrs
PDEFontCreateFlags
PDEFontInfoRec
PDEGraphicState
PDEGraphicStateWasSetFlags
PDEImageAttrFlags
PDEImageAttrs
PDEImageDataFlags
PDEPathElementType
PDEPathOpFlags
PDETextFlags
PDETextRenderMode
PDETextState
PDETextStateWasSetFlags
PDEType
PDSysFontMatchFlags

Notifications

The following notifications were added for PDFEdit.

PagePDEContentDidChange
PagePDEContentNotCached

Version 4

Objects

The following objects were added in version 4.0.

ASExtension
PDEDeviceNColors
PDEGroup
PDEShading
PDEUnknown
PDNameTree
PDNumTree
PDPageLabel
PDSAttrObj
PDSClassMap
PDSElement
PDSMC
PDSRoleMap
PDSTreeRoot

Methods

The following methods were obsoleted in version 4.0.

PDPageEnumContents
PDPageEnumResources

The following methods were added in version 4.0.

Available only if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to 0x00040000 or higher.

ASEnumExtensions
ASExtensionGetFileName
ASExtensionGetRegisteredName
ASFileStmWrOpen
ASProcStmWrOpen
HFTIsValid

Available only if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to 0x00040000 or higher.

AVAnnotHandlerDeleteInfo
AVAnnotHandlerGetInfo
AVAppHandlePlatformEvent
AVAppOpenHelpFile
AVDocAlert
AVDocAlertConfirm
AVDocAlertNote
AVDocAlertYesNo
AVDocDoCopyAs

AVDocDoPrint
AVDocDoSaveAsWithParams
AVDocIsReadOnly
AVDocSelectionEnumPageRanges
AVDocSetReadOnly
AVMenuIsHiddenOnMenubar
AVMenubarAddHiddenMenu
AVPageViewAppearanceGetAVMatrix
AVPageViewDeviceRectToPageRZ
AVPageViewDoPopupMenu
AVPageViewDrawAnnotSequence
AVPageViewGetGrayRect
AVPageViewGetVisibleAnnotPage
AVPageViewInvertQuad
AVPageViewShowControl
AVPageViewTransformRectRZ
AVSysAllocTimeStringFromTimeRec
AVToolBarNewFlyout
AVToolButtonGetFlyout
AVToolButtonGetIcon
AVToolButtonGetMenu
AVToolButtonSetFlyout
AVToolButtonSetIcon
AVToolButtonSetMenu
AVWindowHandlePlatformEvent

Available only if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to 0x00040005 or higher.

AVAppRegisterForPageViewKeyDown
AVAppUnregisterForPageViewKeyDown

Available only if **PI_COS_VERSION** (in PIRequir.h) is set to 0x00040000 or higher.

CosArrayRemoveNth
CosDocEnumEOFs
CosDocEnumIndirect
CosDocGetObjByID
CosDocSaveWithParams
CosObjCopy
CosObjGetGeneration
CosObjGetID
CosObjHash
CosStringGetHexFlag
CosStringSetHexFlag

Available only if **PI_COS_VERSION** (in PIRequir.h) is set to 0x00040005 or higher.

CosCryptGetVersion
CosDecryptGetMaxKeyBytes
CosEncryptGetMaxKeyBytes

Available only if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to 0x00040000 or higher.

PDDocCreateNameTree
PDDocCreateStructTreeRoot
PDDocEnumResources
PDDocExportNotes
PDDocFindPageNumForLabel
PDDocFromCosDoc
PDDocGetLabelForPageNum
PDDocGetNameTree
PDDocGetPageLabel
PDDocGetStructTreeRoot
PDDocImportCosDocNotes
PDDocImportNotes
PDDocOpenWithParams
PDDocReadAheadPages
PDDocRemoveNameTree
PDDocRemovePageLabel
PDDocRemoveStructTreeRoot
PDDocSetPageLabel
PDFontFromCosObj
PDGetAnnotHandlerByName
PDImageSelectAlternate
PDImageSelAdjustMatrix
PDImageSelGetDeviceAttr
PDImageSelGetGeoAttr
PDNameTreeEnum
PDNameTreeEqual
PDNameTreeFromCosObj
PDNameTreeGet
PDNameTreeGetCosObj
PDNameTreeIsValid
PDNameTreeNew
PDNameTreePut
PDNameTreeRemove
PDPageGetAnnotSequence
PDPageLabelEqual
PDPageLabelFromCosObj
PDPageLabelGetCosObj
PDPageLabelGetPrefix
PDPageLabelGetStart
PDPageLabelGetStyle
PDPageLabelIsValid

PDPageLabelNew
PDRegisterAnnotHandler

The following methods were added for the Adobe PDF Library.

ASAtomGetCount
ASPurgeMemory
PDFLPrintDoc

The following methods were added for Placed PDF, which is part of the Adobe PDF Library.

AGMCleanup
AGMClip
AGMClosePath
AGMConcat
AGMDeletePort
AGMDeleteRasterDev
AGMFill
AGMInit
AGMLineTo
AGMMoveTo
AGMNewBitmapPort
AGMNewPath
AGMNewRasterDev
AGMNewRasterPort
AGMNewWindowPort
AGMSetAntiAliasPolicy
AGMSetRGBColor
CCSetSystemCalibration
PDDocPrintPages
PDFontDownloadContextCreate
PDFontDownloadContextDestroy
PDFontStreamPS
PDFontWasExtracted
PDFontWasFauxed
PDFreeMemory
PDPageDrawContents
PDPageDrawContentsPlaced
PDPageDrawContentsPlacedToWindow
PDPageEmitPSOrient

The following methods were added for PDFEdit.

Available only if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to 0x00040000 or higher.

PDEClipFlattenedEnumElems
PDEContentGetDefaultColorSpace

PDEDeviceNColorsGetColorValue
PDEElementIsAtPoint
PDEElementIsAtRect
PDEFontGetNumCodeBytes
PDEFontGetOneByteEncoding
PDEFontIsMultiByte
PDEFontSumWidths
PDEGroupGetContent
PDEImageGetDecodeArray
PDETextGetNumBytes
PDETextIsAtPoint
PDETextIsAtRect

Available only if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to 0x00040000 or higher.

PDEClipAddElem
PDEClipCopy
PDEClipCreate
PDEColorSpaceCreate
PDEDeviceNColorsCreate
PDEFontCreateFromSysFontEx
PDEFontCreateWithParams
PDEGroupCreate
PDEGroupSetContent
PDEImageSetDecodeArray
PDEPurgeCache
PDEShadingCreateFromCosObj
PDEUnknownGetOpName

Available only if **PI_PDSYSFONT_VERSION** (in PIRequir.h) is set to 0x00040000 or higher.

PDEmbedSysFontForPDEFont
PDFindSysFontEx
PDSysFontAcquirePlatformData
PDSysFontGetCIDSystemInfo
PDSysFontGetType0Widths
PDSysFontGetWidthsEx
PDSysFontReleasePlatformData

The following methods were added for PDS (Structure level).

Available only if **PI_PDS_READ_VERSION (**in PIRequir.h) is set to 0x00040000 or higher.

PDSAttrObjGetOwner
PDSClassMapGetAttrObj
PDSClassMapGetNumAttrObjs
PDSElementGetAlt
PDSElementGetAttrObj

PDSElementGetClass
PDSElementGetFirstPage
PDSElementGetID
PDSElementGetKid
PDSElementGetNumAttrObjs
PDSElementGetNumClasses
PDSElementGetNumKids
PDSElementGetParent
PDSElementGetRevision
PDSElementGetStructTreeRoot
PDSElementGetTitle
PDSElementGetType
PDSMCGetParent
PDSOBJGetParent
PDSRoleMapDoesMap
PDSRoleMapGetDirectMap
PDSTreeRootGetClassMap
PDSTreeRootGetElementFromID
PDSTreeRootGetKid
PDSTreeRootGetNumKids
PDSTreeRootGetRoleMap

Available only if **PI_PDS_WRITE_VERSION (**in PIRequir.h) is set to 0x00040000 or higher.

PDSAttrObjCreate
PDSAttrObjCreateFromStream
PDSClassMapAddAttrObj
PDSClassMapRemoveAttrObj
PDSClassMapRemoveClass
PDSElementAddAttrObj
PDSElementAddClass
PDSElementClearID
PDSElementCreate
PDSElementIncrementRevision
PDSElementInsertKid
PDSElementInsertMCAsKid
PDSElementInsertOBJAsKid
PDSElementRemoveAttrObj
PDSElementRemoveAllAttrObjs
PDSElementRemoveAllClasses
PDSElementRemoveClass
PDSElementRemoveKid
PDSElementRemoveKidMC
PDSElementReplaceKid
PDSElementReplaceKidMC
PDSElementReplaceKidOBJ
PDSElementSetAlt

PDSElementSetID
PDSElementSetTitle
PDSElementSetType
PDSRoleMapCopy
PDSRoleMapMap
PDSRoleMapUnMapDst
PDSRoleMapUnMapSrc
PDSTreeRootCreateClassMap
PDSTreeRootCreateRoleMap
PDSTreeRootInsertKid
PDSTreeRootRemoveClassMap
PDSTreeRootRemoveKid
PDSTreeRootRemoveRoleMap
PDSTreeRootReplaceKid

Available only if **PI_WIN_VERSION** (in PIRequir.h) is set to 0x00040000 or higher.

WinAppGetPrinterHDC

The following methods are now replaceable.

AVDocDoPrint
AVDocDoSaveAsWithParams
AVDocPrintPages
AVDocPrintPagesWithParams
PDImageSelectAlternate

Callbacks

The following callbacks were added in version 4.0.

ASExtensionEnumProc
ASProcStmDestroyProc
ASStmProc
AVAnnotHandlerDeleteInfoProc
AVAnnotHandlerGetInfoProc
AVDocSelectionEnumPageRangesProc
AVDocSelectionGetSelectionTypeProc
AVPageViewKeyDownProc
AVSelectionPageRangeEnumProc
AVWindowDestroyPlatformThingProc
CosDocEnumEOFsProc
CosObjOffsetProc
CosObjSetCallbackFlagProc
DoClickProcType
DoLeaveProcType
GetSelectionServerProcType
PDAnnotHandlerDeleteAnnotInfoProc
PDAnnotHandlerGetAnnotInfoFlagsProc
PDAnnotHandlerGetAnnotInfoProc

PDAnnotHandlerGetTypeProc
PDAnnotWillPrintProc
PDCryptNewCryptDataExProc
PDDocPreSaveProc
PDDocWillExportAnnotCallback
PDDocWillExportAnnotProc
PDDocWillImportAnnotCallback
PDDocWillImportAnnotProc
PDEClipEnumProc
PIExportHFTsProcType
PIHandshake
PIImportReplaceAndRegisterProcType
PIInitProcType
PIUnloadProcType

The following callbacks were added for the Adobe PDF Library.

ASMemAllocProc
ASMemAvailProc
ASMemFreeProc
ASMemReallocProc
PDFLPrintCancelProc
TKResourceAcquireProc
TKResourceReleaseProc

The following callbacks were added for Placed PDF, which is part of the Adobe PDF Library.

AGMMemAllocator
AGMMemDeleter
AGMPortDestructProcPtr
DoCancel
DocBegin
DocEnd
DocSetup
EmitPageContents
EmitPrologString
EmitPSFontBegin
EmitPSFontEncodingBegin
EmitPSFontEncodingEnd
EmitPSFontEnd
EmitPSResourceBegin
EmitPSResourceEnd
EndSetup
FlushString
GetFontVMUsage
NotifyNewPage

PageBegin
PageEnd
PageSetup
PDPrintCanEmitFontProc
PDPrintEmitFontProc
PDPrintEmitPrologResourceProc
PDPrintGetFontEncodingMethodProc

Data

The following data structures were added in version 4.0.

AGMBlackPointFlt
AGMColorRangeFlt
AGMGrayCalFlt
AGMLabCalFlt
AGMRGBCalFlt
AGMWhitePointFlt
AGMXYZColorFlt
AVAnnotHandler
AVAnnotHandlerInfo
AVDocSaveParams
AVIcon
AVPageViewControlID
PDAnnotHandler
PDAnnotInfo
PDDocCopyParams
PDDocOpenParams
PDDocPreSaveInfo
PDEColorSpaceStruct
PDEDeviceNColorData
PDEFontCreateParams
PDEGrayCalFlt
PDEICCBasedColorData
PDEIndexedColorData
PDELabCalFlt
PDEPatternColorSpace
PDERGBCalFlt
PDESeparationColorData
PDFLPrintUserParamsRec (for Adobe PDF Library)
PDFontStyles
PDPageDrawFlags
PIHandshakeData_V0200
StdPassword
StdSecurityData
TKAllocatorProcs (for Adobe PDF Library)
TKResourceProcs (for Adobe PDF Library)

The following data structures were added for Placed PDF, which is part of the Adobe PDF Library.

AGMCMYKColorRec
AGMColorTab
AGMFixedMatrix
AGMFixedPoint
AGMImageAlphaRecord
AGMInt16Rect
AGMLABColorRec
AGMMemObj
AGMRGBColorRec
PDPageDrawFlags
PDPrintClient

Errors

The following errors were added in version 4.0.

avErrActionExternal
avErrActionFullScreen
avErrActionRestricted
avErrCantOpenDialog
avErrCantOpenPrinting
pageErrBadEPSColorSpace
pageErrBadFunction
pageErrInvalidImageMaskDepth
pdErrCannotMergeWithSubsetFonts
pdErrHostEncodingNotSet
pdErrNoPDDocForCosDoc
peErrBadBlockHeader
peErrCantCreateFontSubset
peErrCantEmbedFont
peErrCantGetAttrs
peErrCantGetWidths
peErrCantReadImage
peErrFontToEmbedNotOnSys
peErrNoError
peErrPStackUnderflow
peErrUnknownPDEColorSpace
peErrUnknownResType
peErrWrongPDEObjectType

Notifications

The following notifications were added in version 4.0.

AVAppWillCloseAllInternalDocs
AVDocDidClickName
AVDocDidPrint
AVDocWillPrint

PDBookmarkDidUnlink
PDDocDidClose
PDDocDidExportAnnots
PDDocDidImportAnnots
PDDocDidInsertPagesEx
PDDocPageLabelDidChange
PDDocWillClose
PDDocWillExportAnnots
PDDocWillImportAnnots
PDDocWillInsertPagesEx
PDNameTreeNameAdded
PDNameTreeNameRemoved
PSPrintAfterBeginPageSetup
PSPrintAfterBeginProlog
PSPrintAfterBeginSetup
PSPrintAfterEmitExtGState
PSPrintAfterPageTrailer
PSPrintAfterTrailer
PSPrintBeforeEndComments
PSPrintBeforeEndSetup

Version 5.0

Objects

The following objects were added in version 5.0.

ASCab
ASText
AVCommand
AVSweetPea
PDEBeginContainer
PDEBeginGroup
PDEEndContainer
PDEEndGroup
PDEPS
PDESoftMask
PDEXGroup
PDSysEncoding

Modifed Objects

The following objects were modified in version 5.0.

PDWord

Methods

The following method was deprecated in version 5.0.

ASPathFromPlatformPath

The following method was deleted in version 5.0.

AVAppWindowHandlePlatformEvent

The following methods were added or modified in version 5.0.

Available only if **PI_ASEXTRA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASCabCopy
ASCabDestroy
ASCabDestroyEmpties
ASCabDetachBinary
ASCabDetachCab
ASCabDetachPathName
ASCabDetachPointer
ASCabDetachString
ASCabDetachText
ASCabDup
ASCabEnum
ASCabEqual
ASCabFromEntryList
ASCabGetAtom

ASCabGetBinary
ASCabGetBinaryCopy
ASCabGetBool
ASCabGetCab
ASCabGetDouble
ASCabGetInt
ASCabGetPathNameCopy
ASCabGetPointer
ASCabGetPointerDestroyProc
ASCabGetPointerType
ASCabGetString
ASCabGetStringCopy
ASCabGetText
ASCabGetType
ASCabKnown
ASCabMakeEmpty
ASCabMunge
ASCabNew
ASCabNumEntries
ASCabPutAtom
ASCabPutBinary
ASCabPutBool
ASCabPutCab
ASCabPutDouble
ASCabPutInt
ASCabPutNull
ASCabPutPathName
ASCabPutPointer
ASCabPutString
ASCabPutText
ASCabReadFromStream
ASCabRemove
ASCabRename
ASCabValueEqual
ASCabWriteToStream
ASScriptFromHostEncoding
ASScriptToHostEncoding
ASTextCat
ASTextCatMany
ASTextCmp
ASTextCopy
ASTextDestroy
ASTextDup
ASTextFromEncoded
ASTextFromInt32
ASTextFromPDText
ASTextFromScriptText

ASTextFromSizedEncoded
ASTextFromSizedPDText
ASTextFromSizedScriptText
ASTextFromSizedUnicode
ASTextFromUnicode
ASTextFromUns32
ASTextGetBestEncoding
ASTextGetBestScript
ASTextGetCountry
ASTextGetEncoded
ASTextGetEncodedCopy
ASTextGetLanguage
ASTextGetPDTextCopy
ASTextGetScriptText
ASTextGetScriptTextCopy
ASTextGetUnicode
ASTextGetUnicodeCopy
ASTextIsEmpty
ASTextMakeEmpty
ASTextNew
ASTextNormalizeEndOfLine
ASTextReplace
ASTextReplaceASCII
ASTextSetCountry
ASTextSetEncoded
ASTextSetLanguage
ASTextSetPDText
ASTextSetScriptText
ASTextSetSizedEncoded
ASTextSetSizedPDText
ASTextSetSizedScriptText
ASTextSetSizedUnicode
ASTextSetUnicode

Available only if **PI_ACROSUPPORT_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

ASFileGetOpenMode
ASFileGetURL
ASFileHardFlush
ASFileIsSame
ASFileSysAcquireParent
ASFileSysCreateFolder
ASFileSysDestroyFolderIterator
ASFileSysDisplayStringFromPath
ASFileSysFirstFolderItem
ASFileSysFlushVolume
ASFileSysGetItemProps

ASFileSysGetNameFromPath
ASFileSysGetStorageFreeSpace
ASFileSysGetTempPathName
ASFileSysGetTypeAndCreator
ASFileSysNextFolderItem
ASFileSysRemoveFolder
ASFileSysSetTypeAndCreator
ASFileSysURLFromPath
ASGetSecs
ASHostMBLen
ASPathFromPlatformPath
HFTReplaceEntryEx
HFTUnreplaceEntry

Available only if **PI_ACROVIEW_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

AVAcquireSpecialFilePathName
AVAcquireSpecialFolderPathName
AVAlertGetPref
AVAlertResetPrefs
AVAlertSetPref
AVAlertWithParams
AVAppChooseFolderDialog
AVAppDidOrWillSwitchForDialog
AVAppFindCommandHandlerByName
AVAppFindGlobalCommandByName
AVAppGetLanguageEncoding
AVAppGetReportProc
AVAppGetToolBarByName
AVAppOpenDialog
AVAppRegisterCommandHandler
AVAppRegisterFromPDFHandler
AVAppRegisterGlobalCommand
AVAppRegisterToolBarPosition
AVAppRegisterToPDFHandler
AVAppSaveDialog
AVAppUnregisterGlobalCommand
AVAppYieldToOtherApps
AVCommandCancel
AVCommandDestroy
AVCommandExecute
AVCommandGetAVDoc
AVCommandGetCab
AVCommandGetCancelProc
AVCommandGetConfig
AVCommandGetInputs
AVCommandGetName

AVCommandGetParams
AVCommandGetPDDoc
AVCommandGetProgressMonitor
AVCommandGetProps
AVCommandGetReportProc
AVCommandGetStatus
AVCommandGetUIPolicy
AVCommandNew
AVCommandPutCab
AVCommandReset
AVCommandSetConfig
AVCommandSetInputs
AVCommandSetParams
AVCommandShowDialog
AVCommandWork
AVConversionConvertFromPDFWithHandler
AVConversionConvertToPDF
AVConversionConvertToPDFWithHandler
AVConversionEnumFromPDFConverters
AVConversionEnumToPDFConverters
AVDocFromPDDoc
AVDocIsDead
AVDocPerformActionEx
AVDocPermRequest
AVExtensionAcquireInfo
AVExtensionGetNumPlugIns
AVExtensionReleaseInfo
AVIdentityGetText
AVIdentitySetText
AVPageViewClearFocusAnnot
AVPageViewDeviceToInfo
AVPageViewDragOutNewRectSnapped
AVPageViewDragRectSnapped
AVPageViewDrawRectOutlineWithHandles
AVPageViewFilterKeyDownForFocusAnnot
AVPageViewFocusAnnotPerformOp
AVPageViewGetFocusAnnot
AVPageViewGetMousePositionSnapped
AVPageViewGhostRectOutline
AVPageViewInfoToDevice
AVPageViewInfoToPoint
AVPageViewIsAnnotOfTypeAtPoint
AVPageViewIsFocusAnnot
AVPageViewPointToInfo
AVPageViewResumeOffscreenDrawing
AVPageViewScrollToAnnot
AVPageViewSetFocusAnnot

AVPageViewSnapPoint
AVPageViewSnapRect
AVPageViewSuspendOffscreenDrawing
AVPageViewUpdateInfoPanel
AVRectHandleHitTest
AVSweetPeaGetBasicSuiteP
AVSweetPeaGetPluginRef
AVSweetPeaGetResourceAccess
AVSweetPeaIsADMAvailable
AVSweetPeaProcessADMEvent
AVSweetPeaSetResourceAccess
AVSysSetWaitCursor
AVToolBarNew
AVUtilGetBaseNameAndExtensionByPathName
AVUtilGetBaseNameAndExtensionByString
AVWindowCenter
AVWindowEnsureInBounds

Available only if **PI_PDMETADATA_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

CosDictGetXAPMetadata
CosDictSetXAPMetadata
PDDocCalculateImplicitMetadata
PDDocGetXAPMetadata
PDDocSetXAPMetadata
PDEContainerGetXAPMetadata
PDEContainerSetXAPMetadata

Available only if **PI_COS_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

CosCopyStringValue
CosDocGetID
CosObjCmp
CosStringValueSafe

Available only if **PI_PDMODEL_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDBookmarkGetColor
PDBookmarkGetFlags
PDBookmarkRemoveAction
PDBookmarkSetColor
PDBookmarkSetFlags
PDDocExportSomeNotes
PDDocGetPageObjByNum
PDDocPermRequest
PDDocRemoveOpenAction
PDLinkAnnotRemoveAction

PDNameTreeNotifyNameAdded
PDNameTreeNotifyNameRemoved
PDPageDrawContentsToWindowEx
PDPageGetBox
PDPageGetPalette
PDPageHasTransparency
PDPageResumePDEContentChanged
PDPageSetBox
PDTextSelectCreatePageHiliteEx
PDTextSelectCreateRangesEx
PDTextSelectCreateWordHiliteEx
PDTextSelectEnumTextUCS
PDPageSuspendPDEContentChanged

Available only if **PI_PDFEDIT_READ_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDEBeginContainerGetDict
PDEBeginContainerGetMCTag
PDEElementHasGState
PDEExtGStateAcquireSoftMask
PDEExtGStateGetAIS
PDEExtGStateGetBlendMode
PDEExtGStateGetOpacityFill
PDEExtGStateGetOpacityStroke
PDEExtGStateGetOPFill
PDEExtGStateGetOPM
PDEExtGStateGetOPStroke
PDEExtGStateGetSA
PDEExtGStateGetTK
PDEExtGStateHasSoftMask
PDEFormAcquireXGroup
PDEFormHasXGroup
PDEImageGetMatteArray
PDEImageGetSMask
PDEImageHasSMask
PDESoftMaskAcquireForm
PDESoftMaskGetBackdropColor
PDESoftMaskGetCosObj
PDESoftMaskGetName
PDESoftMaskGetTransferFunction
PDETextGetMatrix
PDETextGetState
PDEXGroupAcquireColorSpace
PDEXGroupGetCosObj
PDEXGroupGetIsolated
PDEXGroupGetKnockout
PDSysEncodingGetWMode

PDSysEncodingIsIdentity
PDSysEncodingIsMultiByte

Available only if **PI_PDFEDIT_WRITE_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDEBeginContainerCreate
PDEBeginContainerSetDict
PDEBeginContainerSetMCTag
PDEBeginGroupCreate
PDEEndContainerCreate
PDEEndGroupCreate
PDEExtGStateCreateNew
PDEExtGStateSetAIS
PDEExtGStateSetBlendMode
PDEExtGStateSetOpacityFill
PDEExtGStateSetOpacityStroke
PDEExtGStateSetOPFill
PDEExtGStateSetOPM
PDEExtGStateSetOPStroke
PDEExtGStateSetSA
PDEExtGStateSetSoftMask
PDEExtGStateSetTK
PDEFontCreateFromSysFontAndEncoding
PDEFontCreateFromSysFontWithParams
PDEFontCreateToUnicodeNow
PDEFontCreateWidthsNow
PDEFontEmbedNow
PDEFontEmbedNowDontSubset
PDEFontGetCreateNeedFlags
PDEFontGetWidthsNow
PDEFontTranslateGlyphIdsToUnicode
PDEFormSetXGroup
PDEImageSetColorSpace
PDEImageSetMatteArray
PDEImageSetSMask
PDESoftMaskCreate
PDESoftMaskCreateFromCosObj
PDESoftMaskCreateFromName
PDESoftMaskSetBackdropColor
PDESoftMaskSetTransferFunction
PDESoftMaskSetXGroup
PDETextRunSetMatrix
PDETextRunSetState
PDEXGroupCreate
PDEXGroupCreateFromCosObj
PDEXGroupSetColorSpace
PDEXGroupSetIsolated

PDEXGroupSetKnockout
PDSysEncodingCreateFromBaseName
PDSysEncodingCreateFromCMapName
PDSysFontGetCreateFlags

Available only if **PI_PDSYSFONT_VERSION** (in PIRequir.h) is set to **0x00050000** or higher.

PDFindSysFontForPDEFont

Available only if **PI_PDS_READ_VERSION (**in PIRequir.h) is set to **0x00050000** or higher.

PDSElementGetActualText
PDSElementGetKidEx
PDSElementGetLanguage
PDSElementHasActualText
PDSElementHasAlt
PDSElementHasLanguage

Available only if **PI_PDS_WRITE_VERSION (**in PIRequir.h) is set to **0x00050000** or higher.

PDSElementRemoveKidOBJ
PDSElementSetActualText
PDSElementSetLanguage

Available only if **PI_WIN_VERSION (**in PIRequir.h) is set to **0x00050000** or higher.

WinAppRegisterInterface

Callbacks (new or modified)

The following callbacks were added in version 5.0.

ASCabEnumProc
ASCabPointerDestroyProc
ASCancelProc
ASFileSysCreateFolderProc
ASFileSysDestroyFolderIteratorProc
ASFileSysDisplayStringFromPathProc
ASFileSysFirstFolderItemProc
ASFileSysGetItemPropsProc
ASFileSysGetParentProc
ASFileSysGetTypeAndCreatorProc
ASFileSysNextFolderItemProc
ASFileSysRemoveFolderProc
ASFileSysSetTypeAndCreatorProc
ASFileSysURLFromPathProc
ASReportProc
AVActionPerformExProc
AVAnnotHandlerCanPerformOpProc
AVAnnotHandlerDoKeyDownExProc

AVAnnotHandlerDrawExProc
AVAnnotHandlerPerformOpProc
AVCmdHandlerInitProc
AVCmdHandlerTermProc
AVCommandCancelProc
AVCommandCreatedProc
AVCommandDestroyProc
AVCommandGetProc
AVCommandPostflightFileProc
AVCommandPostflightSequenceProc
AVCommandPreflightFileProc
AVCommandPreflightSequenceProc
AVCommandRegisterCommandsProc
AVCommandResetProc
AVCommandSetProc
AVCommandShowDialogProc
AVCommandWorkProc
AVConversionConvertFromPDFProc
AVConversionConvertToPDFProc
AVConversionDefaultSettingsProc
AVConversionFromPDFEnumProc
AVConversionParamDescProc
AVConversionSettingsDialogProc
AVConversionToPDFEnumProc
AVDocPermReqProc
AVDocSelectionGetAVRectProc
AVDocSelectionShowMenuProc
AVOpenSaveDialogSettingsComputeEnabledProc
AVOpenSaveDialogSettingsExecuteProc
AVSetFocusProc
PDCryptAuthorizeExProc
PDCryptBatchAuthorizeProc
PDCryptBatchFreeAuthDataProc
PDCryptBatchNewAuthDataProc
PDCryptBatchParamDescProc
PDCryptBatchPostSequenceProc
PDCryptBatchPreSequenceProc
PDCryptBatchShowDialogProc
PDCryptBatchUpdateSecurityDataProc
PDCryptDisplaySecurityDataProc
PDCryptGetAuthDataExProc
PDCryptReservedProc
PDImplicitMetadataProc
PMSetTextProc

Data (New or modified)

The following data structures were added or changed in version 5.0.

ASCabEntryRec
ASCabMungeAction
ASCabValueType
ASFile Flags
ASFileSysCreatePathFromCString (macro)
ASFileSysCreatePathFromDIPath (macro)
ASFileSysCreatePathFromFSSpec (macro)
ASFileSysCreatePathWithFolderName (macro)
ASFileSysRec
ASFileSysItemProps
ASFileSysItemType
ASFolderIterator
ASFixedRoundToInt16 (macro)
ASHostEncoding
ASMDFile (replaced **MDFile**)
ASPortRef
ASProgressMonitor
ASReportType
ASScript
ASUnicodeFormat
ASWindowRef
AVAccessColorPolicy
AVActionContext
AVAlertButtonInfo
AVAlertCheckBoxInfo
AVAlert Icons
AVAlertParams
AVAnnotHandler
AVAnnotOp
AVAnnotOpData
AVBatchContext
AVCommandHandler
AVCommandStatus
AVCommandUIPolicy
AVConversionClientData
AVConversionEnumProcData
AVConversionFlags
AVConversionFromPDFHandler
AVConversionStatus
AVConversionToPDFHandler
AVDocOpenParams
AVDocPrintParams
AVDocSaveParams
AVDocSelectionServer
AVDragType
AVExtensionInfo
AVFileDescRec

AVFileFilterRec
AVFullScreenMonitor
AVIconBundle
AVIdentity
AVInfoPanelUpdateType
AVOpenSaveDialogFlags
AVOpenSaveDialogParams
AVPageViewControlID
AVPrefsType
AVRectHandleType
AVSpecialCategory
AVSpecialError
AVSpecialFolder
AVStatusMonitorProcs
AVToolBarDockPosition
AVToolBarLayout
AVToolBarPosition
AVTransitionPort
AVWindow Flags
AVWindowLayer
AVZoomType
Command Keys
Emit Flags
ExternalDocServerCreationData
Modifier Keys
PDAnnotArray
PDAnnotInfo
PDCryptBatchHandler
PDCryptHandler
PDEFontCreateFromSysFontParams
PDEFontCreateFlags
PDEFontCreateNeedFlags
PDEGrayCalFlt
PDELabCalFlt
PDERGBCalFlt
PDESoftMaskCreateFlags
PDETextState
PDEType
PDEXGroupCreateFlags
PDPermReqObj
PDPermReqOpr
PDPermReqStatus
PDTile
Predefined Cursors
StdSecurityData
Type/Creator Codes

Errors

The following errors were added in version 5.0.

pdErrCannotBeBlankPage
pdErrCannotDeleteAllPages
pdErrExceedEncryptionLength
pdErrExceedEncryptionVersion
pdErrInvalidPageNumber
pdErrMissingGlyphs
pdErrMissingSubsetFont
pdErrNeedJapanese
pdErrNeedKorean
pdErrNeedSimpChinese
pdErrNeedTradChinese
pdErrNotValidPage
pdErrRequireTrustedMode
pdErrStartLessThanEnd
pdMetadataErrBadXAP
pdMetadataErrBadPDF
pdMetadataErrCouldntCreateMetaXAP
pdMetadataErrInternalError

Notifications

The following notifications were added in version 5.0.

AVAppOldPrefDidChange
AVAppPrefDidChange
AVAppUsingPDDocForBatch
AVDocDidDeleteSelection
AVPageViewAnnotDidPerformOp
AVPageViewWillDraw
PDDocDidChangePageAreas
PDDocCalculateMetadata
PDDocDidOpen
PDDocDidPrintTiledPage
PDDocPrintingTiledPage
PDDocWillPrintTiledPage
PDPageDidPrintAnnot
PDPageDidPrintAnnots
PDPageWillPrintAnnot
PDPageWillPrintAnnots
PDNameTreeNotifyNameAdded
PDNameTreeNotifyNameRemoved
PSPrintBeforeAcrobatProcsets

Deleted PDFLibrary-specific Methods, Callbacks, and Data:

The following methods, callbacks, and data were deleted because they are specific to the PDF Library, so are not available to Acrobat plug-ins:

ASAtomGetCount (method)
ASPurgeMemory (method)
AVExtensionMgrRegisterNotification (method)
AVExtensionMgrUnregisterNotification (method)
PDFLGetVersion (method)
PDFLInit (method)
PDFLPrintDoc (method)
PDFLPrintPDF (method)
PDFLTerm (method)
AGMCleanup (method)
AGMClip (method)
AGMClosePath (method)
AGMConcat (method)
AGMDeletePort (method)
AGMDeleteRasterDev (method)
AGMFill (method)
AGMInit (method)
AGMLineTo (method)
AGMMoveTo (method)
AGMNewBitmapPort (method)
AGMNewPath (method)
AGMNewRasterDev (method)
AGMNewRasterPort (method)
AGMNewWindowPort (method)
AGMSetAntiAliasPolicy (method)
AGMSetRGBColor (method)
CCSetSystemCalibration (method)
PDDocPrintPages (method)
PDFontDownloadContextCreate (method)
PDFontDownloadContextDestroy (method)
PDFontStreamPS (method)
PDFontWasExtracted (method)
PDFontWasFauxed (method)
PDFreeMemory (method)
PDPageDrawContents (method)
PDPageDrawContentsPlaced (method)
PDPageDrawContentsPlacedToWindow (method)
PDPageEmitPSOrient (method)
PDSetHostEncoding (method)
AGMMemAllocator (callback)
AGMMemDeleter (callback)
AGMPortDestructProcPtr (callback)
ASMemAllocProc (callback)
ASMemAvailProc (callback)
ASMemFreeProc (callback)
ASMemReallocProc (callback)
DoCancel (callback)

DocBegin (callback)
DocEnd (callback)
DocSetup (callback)
EmitPageContents (callback)
EmitPrologString (callback)
EmitPSFontBegin (callback)
EmitPSFontEncodingBegin (callback)
EmitPSFontEncodingEnd (callback)
EmitPSFontEnd (callback)
EmitPSResourceBegin (callback)
EmitPSResourceEnd (callback)
EndSetup (callback)
FlushString (callback)
GetFontVMUsage (callback)
NotifyNewPage (callback)
PageBegin (callback)
PageEnd (callback)
PageSetup (callback)
PDFLPrintCancelProc (callback)
PDPrintCanEmitFontProc (callback)
PDPrintEmitFontProc (callback)
PDPrintEmitPrologResourceProc (callback)
PDPrintGetFontEncodingMethodProc (callback)
TKResourceAcquireProc (callback)
TKResourceReleaseProc (callback)
AGMBlackPointFlt (data)
AGMCMYKColorRec (data)
AGMColorRangeFlt (data)
AGMColorTab (data)
AGMFixedMatrix (data)
AGMFixedPoint (data)
AGMGrayCalFlt (data)
AGMImageALphaRecord (data)
AGMInt16Rec (data)
AGMLabCalFlt (data)
AGMLABColorRec (data)
AGMMemObj (data)
AGMRGBCalFlt (data)
AGMRGBColorRec (data)
AGMWhitePointFlt (data)
AGMXYZColorFlt (data)
PDFLData (data)
PDFLPrintUserParamsRec (data)
PDInclusion (data)
PDOutputType (data)
PDPrintClient (data)
PDPrintParams (data)

TKAllocatorProcs (data)
TKResourceProcs (data)

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