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Preface

The Adobe® Acrobat® Forms plug-in allows a Portable Document Format (PDF) document to act as a form; that is, the Acrobat equivalent of a paper form with fields. It is now faster and easier to exchange information either in familiar paper or electronic forms converted to PDF files with Acrobat, or as dynamic interactive database templates.

**NOTE:** Forms as used here do not refer to XObject forms as defined in the *PDF Reference.*

The Forms plug-in for Acrobat (versions 4.0 and above) allows users to author form fields. For Acrobat Reader, the Forms plug-in does not allow form authoring, but allows users to fill in data and print Acrobat forms. The Reader Forms plug-in also does not allow users to save data to the local hard disk. Both Acrobat and Reader allow Web designers to send data from the form back to a Web server.

---

What Is In This Document

This document is a reference for developers who want to take advantage of the Forms API. It is divided into two sections:

- **AcroForm API Reference** describes the Forms API and explains how to use it. It includes the new Text-to-Speech APIs for Windows.

- **AcroForm OLE Automation** describes the OLE Automation methods exported by the Adobe Acrobat AcroForm plug-in.

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](http://partners.adobe.com/asn/developer/acrosdk/main.html). Other Useful Documentation

---

Other Useful Documentation

You should be familiar with the Acrobat core API. The following technical notes provide this information:

*Acrobat Core API Overview*, technical note 5190, gives an overview of the objects and methods provided by the Acrobat core API.

*Acrobat Core API Reference*, technical note 5191, describes in detail the objects and methods provided by the Acrobat core API.

*Acrobat Development Overview*, technical note 5167, describes how to develop Acrobat plug-ins on the various platforms available.
PDF Reference, Fourth Edition, version 1.5. Provides a description of the PDF file format, as well as suggestions for producing efficient PDF files.

## Conventions Used in This Book

The Acrobat documentation uses text styles according to the following conventions.

<table>
<thead>
<tr>
<th>Font</th>
<th>Used for</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>monospaced</td>
<td>Paths and filenames</td>
<td>C:\templates\mytmpl.fm</td>
</tr>
<tr>
<td></td>
<td>Code examples set off from plain text</td>
<td>These are variable declarations: AVMenu commandMenu, helpMenu;</td>
</tr>
<tr>
<td>monospaced bold</td>
<td>Code items within plain text</td>
<td>The <code>GetExtensionID</code> method ...</td>
</tr>
<tr>
<td></td>
<td>Parameter names and literal values in reference documents</td>
<td>The enumeration terminates if <code>proc</code> returns <code>false</code>.</td>
</tr>
<tr>
<td>monospaced italic</td>
<td>Pseudocode</td>
<td>ACCB1 void ACCB2 ExeProc(void) { do something }</td>
</tr>
<tr>
<td></td>
<td>Placeholders in code examples</td>
<td>AFSimple_Calculate(cFunction, cFields)</td>
</tr>
<tr>
<td>blue</td>
<td>Live links to Web pages</td>
<td>The Acrobat Solutions Network URL is: <a href="http://partners/adobe.com/asn/">http://partners/adobe.com/asn/</a></td>
</tr>
<tr>
<td></td>
<td>Live links to sections within this document</td>
<td>See Using the SDK.</td>
</tr>
<tr>
<td></td>
<td>Live links to other Acrobat SDK documents</td>
<td>See the Acrobat Core API Overview.</td>
</tr>
<tr>
<td></td>
<td>Live links to code items within this document</td>
<td>Test whether an <code>ASAtom</code> exists.</td>
</tr>
<tr>
<td>bold</td>
<td>PostScript language and PDF operators, keywords, dictionary key names</td>
<td>The <code>setpagedevice</code> operator</td>
</tr>
<tr>
<td></td>
<td>User interface names</td>
<td>The <code>File</code> menu</td>
</tr>
<tr>
<td>Font</td>
<td>Used for</td>
<td>Examples</td>
</tr>
<tr>
<td>------------</td>
<td>-----------------------------------------------</td>
<td>------------------------</td>
</tr>
<tr>
<td>italic</td>
<td>Document titles that are not live links</td>
<td>Acrobat Core API Overview</td>
</tr>
<tr>
<td></td>
<td>New terms</td>
<td><em>User space</em> specifies coordinates for...</td>
</tr>
<tr>
<td></td>
<td>PostScript variables</td>
<td><em>filename</em> <strong>deletefile</strong></td>
</tr>
</tbody>
</table>
Preface

Conventions Used in This Book
AcroForm API Reference

Introduction

The Acrobat Forms plug-in exports its own Host Function Table (HFT), whose methods can be used by other plug-ins. To use the Acrobat Forms plug-in's HFT, a plug-in must:

- include the header file `FormsHFT.h` (which includes `AF_ExpT.h` and `AF_Sel.h`).
- import the HFT using `ASExtensionMgrGetHFT`. A convenient way to do this is to use the `Init_AcroFormHFT` macro defined in `FORMSHFT.H`.

```
#define Init_AcroFormHFT
    ASExtensionMgrGetHFT(ASAtomFromString(AcroFormHFT_NAME),
                        AcroFormHFT_LATEST_VERSION)
```
- assign the HFT returned by this call to a plug-in-defined global variable named `gAcroFormHFT`.

Data may be imported and exported into Acrobat Forms in Forms Data Format (FDF). FDF is used to submit form data to a server, as well as to receive the response and incorporate it into a form. FDF is based on PDF and uses the same syntax and set of basic object types as PDF. It also has the same file structure, except that the cross-reference table is optional. See the *PDF Reference (Version 1.5, Fourth Edition)*, Section 8.6.6, for more information.

Contents

This reference contains the following:

- **AcroForm Objects** introduces AcroForm-specific API objects and briefly describes Core objects that are extensively used in the AcroForm API.
- **AcroForm Methods** describes in detail all AcroForm methods, including their parameters, return value, and related methods.
- **AcroForm Callbacks** describes in detail the callback functions.
- **AcroForm Declarations** describes in detail the data structures used by the Acrobat Forms plug-in.
- **AcroForm Macros** describes in detail the macros available for use by developers.
- **Text-to-Speech API (Windows only)** describes in detail all methods in the Text-to-Speech API.
## Exceptions

All AcroForm methods may return an exception. Possible exceptions are:

<table>
<thead>
<tr>
<th>Exception Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>gAFpdErrExportFdf</td>
<td>Error during export of FDF document.</td>
</tr>
<tr>
<td>gAFpdErrBadFdf</td>
<td>Invalid FDF document.</td>
</tr>
<tr>
<td>gAFileErrSubmitFdf</td>
<td>Error opening URL to submit this form.</td>
</tr>
<tr>
<td>gAFpdErrReqdFld</td>
<td>Required field found empty during export of FDF document.</td>
</tr>
</tbody>
</table>
AcroForm Objects

The **PDFField** object is introduced in the Forms API.

**PDFField**

A **PDFField** is an opaque object representing a field in an Acrobat form. A PDF document that contains forms has an AcroForm entry in the document catalog dictionary, which contains an array of references to each of the root fields in the document.

The three most important properties of a field are its type, name, and value. Other properties specify the appearance of a field. Fields can be organized into a hierarchy, and other field properties associate it with its parent and children.

There is a field dictionary for every **PDFField**. Acrobat uses annotations to represent a field's appearance and to manage user interactions. A **PDFField** dictionary may also be an annotation, in which case its subtype is **Widget**. There is no ambiguity, because the keys of annotations and **PDFFields** do not overlap.

**PDFFields** are not created until needed. This saves memory and enhances performance. Suppose, for example, a PDF file represents a 100-page catalog, where a purchase order is on the last page. **PDFFields** are not created for all the elements in the purchase order when the document is opened. When the user displays the purchase order, the annotation handler draws the field announcements and creates the **PDFFields** for form fields.

When the annotation handler creates a **PDFField**, it typically displays a page that contains the field.
Core Objects

These objects are defined in the Acrobat Core API and used by the Forms API. For further information about these objects, see the Acrobat Core API Reference.

ASAtom

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

ASBool

A boolean value.

ASFile

An opaque representation of an open file.

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.

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.

CosDoc

A Cos-level representation of an entire PDF file.

CosObj

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

A structure that defines objects and methods used to manipulate annotations, as per the logical model defined in the PDF specification.

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). You can create and delete thumbnails through this object. You can also set and retrieve document information fields through this object as well. The first page in a PDDoc is page 0.

PDPage

A single page in the PDF representation of a document. Just as PDF files are partially composed of their pages, PDDocs are composed of PDPages. 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.
AcroForm Methods

AFExecuteThisScript

```
ASBool AFExecuteThisScript (PDDoc pdd, const char* cScript, char** pRetVal);
```

Description
Executes a JavaScript script.

Parameters

- **pdd**: The PDDoc in which the script is to be executed.
- **cScript**: A string containing the text of the script to be executed. If Unicode, the string must begin with 0xFEFF and end with 2 null bytes. If this is not the case, it is assumed to be in the application's language encoding, as returned by `AVAppGetLanguageEncoding`.
- **pRetVal**: To get a return value from the execution of the script, pass a non-NULL value for this parameter. If on return `*pRetVal` is non-NULL, the caller should dispose of the string by calling `ASFree`. If present, the value will be in host encoding.

**Note**: The script sets this value by assigning it to event.value. See the Acrobat JavaScript Object Specification for more information.

Return Value
The JavaScript value of event.rc. This function pre-initializes it to true; a script may set it to false if desired.

Header File
AF_Sel.h

Example
```
AVDoc avDoc = AVAppGetActiveDoc();
PDDoc pDDoc = AVDocGetPDDoc (avDoc);
char * buf = "console.println("myName");";
AFExecuteThisScript(pDDoc, buf, NULL);
```
AFImportAppearance

ASBool AFImportAppearance(CosDoc cd, CosObj *coIcon, AVDoc avd, char *cTitle);

Description
Opens the dialog box that allows the user to select a PDF to use as the icon for a button.

Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>cd</td>
<td>The CosDoc that contains the appearance you are trying to import.</td>
</tr>
<tr>
<td>coIcon</td>
<td>If AFImportAppearance is successful, coIcon is a pointer to a CosObj that will contain the Cos representation of the appearance.</td>
</tr>
<tr>
<td>avd</td>
<td>The AVDoc that you want the window to be the child of. You can pass NULL if you do not have an AVDoc.</td>
</tr>
<tr>
<td>cTitle</td>
<td>The window title of the dialog box when it appears. You can pass NULL if you want the title of the dialog to be the same as it is when brought up through the field properties dialog.</td>
</tr>
</tbody>
</table>

Return Value
true if appearance was imported properly, false otherwise.

Header File
AF_Sel.h

Related Methods
None

Example
AVDoc avDoc = AVAppGetActiveDoc();
PDDoc pdDoc = AVDocGetPDDoc (avDoc);
char ReturnValue[128] = "";
char* pReturnValue = ReturnValue;
char* buf = "var rc = app.response({cQuestion: 'What is the company ?', cDefault: 'Adobe'} ); if(rc!=null) event.value=rc;";
ASBool bRc = AFExecuteThisScript (pdDoc, buf, &pReturnValue);
if(pReturnValue) {
    AValertNote(pReturnValue)
    ASfree(pReturnValue);
}
**AFLayoutBorder**

```c
void AFLayoutBorder (void* vlayout,
                    AFPDWidgetBorderRec border,
                    PDColorValue pdcvBrdr,
                    PDColorValue pdcvBg,
                    ASBool bDown);
```

**Description**

Draws a border into the layout context.

**Parameters**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>vlayout</code></td>
<td>The layout of the annotation. Use <strong>AFLayoutNew</strong> to create a new layout before calling this method.</td>
</tr>
<tr>
<td><code>border</code></td>
<td>A pointer to a structure containing information about the appearance a border.</td>
</tr>
<tr>
<td><code>pdcvBrdr</code></td>
<td>A <strong>PDColorValue</strong> structure representing the color of the annotations border.</td>
</tr>
<tr>
<td><code>pdcvBg</code></td>
<td>A <strong>PDColorValue</strong> structure representing the color of the annotations background.</td>
</tr>
<tr>
<td><code>bDown</code></td>
<td>A boolean specifying whether the background should be drawn as it is drawn in forms while being &quot;pressed&quot; (clicked by the mouse) or not. If true, draws as if it is a field that is being pressed.</td>
</tr>
</tbody>
</table>

**Return Value**

None

**Header File**

**AF_Sel.h**

**Related Methods**

**AFLayoutNew**

**Example**

```c
AFLayoutBorder (layout, &border, &pdcvBorder, &pdcvBackground, false);
```
**AFLayoutCreateStream**

```c
CosObj AFLayoutCreateStream (void* vlayout);
```

**Description**

Creates a layout stream that can be used as an annotation appearance.

**Parameters**

| vlayout          | The layout of the annotation. Use `AFLayoutNew` to create a new layout before calling this method. |

**Return Value**

A stream `CosObj`.

**Header File**

`AF_Sel.h`

**Related Methods**

- `AFLayoutNew`
- `AFLayoutDelete`

**Example**

```c
// Write the whole thing to a CosStream.
CosObj coStream = AFLayoutCreateStream(layout);
AFLayoutDelete(layout);
```
**AFLayoutDelete**

```c
void AFLayoutDelete (void* vlayout);
```

**Description**

Frees the layout context.

**Parameters**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>vlayout</code></td>
<td>The layout of the annotation to remove.</td>
</tr>
</tbody>
</table>

**Return Value**

None

**Header File**

`AF_Sel.h`

**Related Methods**

- `AFLayoutNew`
- `AFLayoutCreateStream`

**Example**

```c
CosObj coStream = AFLayoutCreateStream(layout);
AFLayoutDelete(layout);
```
**AFLayoutNew**

```c
void* AFLayoutNew (ASFixedRectP frBbox,
PDRotate annotRotation, CosDoc cd);
```

**Description**

Create a new layout context for annotations. Use `PDAnnotGetRect` to get the annotation's bounding box, then use this method to define new layout context.

**Parameters**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>frBbox</td>
<td>The bounding box of the area for text and border data to flow into.</td>
</tr>
<tr>
<td>annotRotation</td>
<td>The rotation of the annotation.</td>
</tr>
<tr>
<td>cd</td>
<td>The CosDoc.</td>
</tr>
</tbody>
</table>

**Return Value**

A new layout.

**Header File**

`AF_Sel.h`

**Related Methods**

- `AFLayoutBorder`
- `AFLayoutText`
- `AFLayoutCreateStream`

**Example**

```c
PDAnnotGetRect (theAnnot, &frBBox);
void *layout = AFLayoutNew (&frBBox, PDPageGetRotate (pdPage),
theCosDoc);
```
AFLayoutText

```c
void AFLayoutText (void* vlayout, ASBool bMultline, ASBool bWrap, AFPDWidgetBorderRec border, TextAppearanceP ta, char* cBytes);
```

**Description**

Sets the text layout for the annotation.

**Note:** Before calling this method, you should call AFLayoutNew to create a new layout, as well as AFLayoutBorder.

**Parameters**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>vlayout</td>
<td>The layout of the annotation.</td>
</tr>
<tr>
<td>bMultline</td>
<td>If true, the text can use multiple lines in a text field. Otherwise, text is single line.</td>
</tr>
<tr>
<td>bWrap</td>
<td>If true, the text will wrap.</td>
</tr>
<tr>
<td>border</td>
<td>The border appearance that defines the width and line style of a border. The border of the annotation should be the same as in your call to AFLayoutBorder.</td>
</tr>
<tr>
<td>ta</td>
<td>A pointer to structure containing font, point size, and color information. You should initialize the structure with the SetDefaultTextAppearanceP macro which defaults to Helvetica.</td>
</tr>
<tr>
<td>cBytes</td>
<td>The text string for the layout.</td>
</tr>
</tbody>
</table>

**Return Value**

None

**Exceptions**

Raises an exception if the field is a radio box or button.

**Header File**

`AF_Sel.h`

**Related Methods**

AFLayoutNew
AFLayoutBorder
Example

PDAnnotGetBBox( theAnnot, &frBBox);
void *layout = AFLayoutNew( &frBBox, PDPageGetRotate( pdPage ), theCosDoc);
AFLayoutBorder( layout, &border, &pdcvBorder, &pdcvBackground, false);
AFLayoutText( layout, true, true, &border, &textAppearance, "Welcome to AcroForm");
AFPDDocEnumPDFields

```c
void AFPDDocEnumPDFields (PDDoc doc, ASBool terminals, ASBool no_repeat, AFPDFieldEnumProc proc, void *clientData);
```

**Description**
Enumerates all **PDFields** that exist in a **PDDoc**.

**Parameters**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>doc</code></td>
<td>The <strong>PDDoc</strong> whose <strong>PDFields</strong> are enumerated.</td>
</tr>
<tr>
<td><code>terminals</code></td>
<td>If true, only <strong>PDFields</strong> without children are enumerated.</td>
</tr>
<tr>
<td><code>no_repeat</code></td>
<td>If true, then only one instance of a <strong>PDField</strong> for each name is enumerated.</td>
</tr>
<tr>
<td><code>proc</code></td>
<td>A user-supplied callback that is called for each <strong>PDField</strong>. The enumeration terminates if <code>proc</code> returns <strong>false</strong>.</td>
</tr>
<tr>
<td><code>clientData</code></td>
<td>Pointer to user-specified data that is passed to <code>proc</code> each time it is called.</td>
</tr>
</tbody>
</table>

**Return Value**
None

**Header File**
`AF_Sel.h`

**Example**
```c
AVDoc currentAVDoc;
PDDoc currentPDDoc;
AFPDFieldEnumProc enumProc;

currentAVDoc = AVAppGetActiveDoc ();
currentPDDoc = AVDocGetPDDoc (currentAVDoc);

/* Set up enumeration */
enumProc = ASCallbackCreateProto (AFPDFieldEnumProc, &FieldEnumProc);
AFPDDocEnumPDFields (currentPDDoc, false, false, enumProc, NULL);
```
AFPDDocGetPDFieldFromName

```c
PDField AFPDDocGetPDFieldFromName (PDDoc doc, char* name);
```

**Description**

Retrieves a `PDField` with a given name from a `PDDoc`. (If multiple fields have the same name, a change to any of them affects all of them.)

**Parameters**

- `doc`  
  The `PDDoc` containing the field.

- `name`  
  Name of the field to retrieve.

**Return Value**

The `PDField` specified by `name`. Returns `NULL` if there is no `PDField` with the given name in the `PDDoc`.

**Header File**

`AF_Sel.h`

**Related Methods**

`AFPDFieldGetName`
**AFPDDocLoadPDFields**

```c
void AFPDDocLoadPDFields (PDDoc doc);
```

**Description**

Makes sure every **PDField** in the given **PDDoc** exists.

**NOTE:** It is no longer necessary to call this method. It still exists for backwards compatibility, but its purpose is now automatically taken care of internally.

**Parameters**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>doc</code></td>
<td>The <strong>PDDoc</strong> for the form whose <strong>PDFields</strong> are loaded.</td>
</tr>
</tbody>
</table>

**Return Value**

None

**Header File**

`AF_Sel.h`
**AFPDFieldFromCosObj**

```c
PDField AFPDFieldFromCosObj (CosObj dict);
```

**Description**
Retrieves the `PDField` object for which a Cos object is the dictionary.

**Parameters**

| dict | The Cos object for which to retrieve the corresponding `PDField` object. |

**Return Value**
The `PDField` corresponding to `dict`. Returns `NULL` if the Cos object is not a `PDField`.

**Header File**
`AF_SEL.h`

**Related Methods**
- `AFPDFieldGetCosObj`

**Example**
```c
PDAnnot anAnnotation;
CosObj annotCosObj;
PDField annotField;

/* Get PDField for Cos object */
annotCosObj = PDAnnotGetCosObj (anAnnotation);
annotField = AFPDFieldFromCosObj (annotCosObj);
```
**AFPDFieldGetCosObj**

```c
CosObj AFPDFieldGetCosObj (PDField fldP);
```

**Description**

Retrieves the Cos object which is the field object of a `PDField` object.

**Parameters**

- `fldP` The `PDField` object for which to retrieve the corresponding Cos object.

**Return Value**

Cos object corresponding to the `PDField` object `fldP`.

**Header File**

`AF_Sel.h`

**Related Methods**

- `AFPDFieldGetCosObj`
- `AFPDFieldGetDefaultTextAppearance`
- `AFPDFieldGetName`
- `AFPDFieldGetValue`

**Example**

```c
PField fldP;
CosObj fieldCosObject;

if (AFPDFieldIsValid (fldP)) {
    /* Get Cos Object for field */
    fieldCosObject = AFPDFieldGetCosObj (fldP);
```


**AFPDFieldGetDefaultTextAppearance**

```c
void AFPDFieldGetDefaultTextAppearance (PDField fldP,
                                       TextAppearanceP aP);
```

**Description**

Gets the default text appearance of a field. Use this method to get the font, size, color, and so forth—values that were set through the field properties dialog box.

**Parameters**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>fldP</code></td>
<td>The PDField object for which to retrieve the text appearance.</td>
</tr>
<tr>
<td><code>aP</code></td>
<td>A pointer to a structure describing the text appearance. Returns text matrix, quadding, text color, and so forth.</td>
</tr>
</tbody>
</table>

**Return Value**

None

**Header File**

`AF_Sel.h`

**Related Methods**

- `AFPDWidgetSetAreaColors`
**AFPDFieldGetFlags**

```c
ASUns32 AFPDFieldGetFlags (PDField fldP, AF_Flags_t flagType);
```

**Description**
Retrieves the flags of a PDField for a given flag type.

**Parameters**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>fldP</code></td>
<td>The PDField whose flags are obtained.</td>
</tr>
<tr>
<td><code>flagType</code></td>
<td>Type of flags to obtain.</td>
</tr>
</tbody>
</table>

**Return Value**
The value of flags of `flagType`.

**Header File**
`AF_Sel.h`

**Related Methods**
- `AFPDFieldGetName`
- `AFPDFieldGetValue`
- `AFPDFieldSetFlags`
AFPDFieldGetName

```c
char* AFPDFieldGetName (PDField fldP);
```

Description

Gets the name of a PDField object.

Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>fldP</td>
<td>The PDField whose name is retrieved.</td>
</tr>
</tbody>
</table>

Return Value

A C program NULL-terminated string.

**NOTE:** Do not modify or free this string. To use this string indefinitely, copy it to a private buffer.

Header File

AF_Sel.h

Related Methods

- AFPDFieldGetDefaultTextAppearance
- AFPDFieldGetValue

Example

```c
PDField fldP;
char *fieldName;

fieldName = AFPDFieldGetName (fldP);
```
**AFPDDFieldGetValue**

```
CosObj AFPDFieldGetValue (PDFIELD fldP);
```

**Description**

Retrieves the value from a **PDFIELD**. The value is stored in the field entry with the **V** key. Values can be inherited. If a **PDFIELD** Cos object does not have a **V** key, its value is inherited from a parent’s **V** key (the parent must have the same name as the **PDFIELD**). For example, radio buttons inherit values this way.

**Note:** Retrieving the value of a radio button or combo box requires Cos-level programming. See the *PDF Reference* for details.

**Parameters**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>fldP</code></td>
<td>The <strong>PDFIELD</strong> whose value is retrieved.</td>
</tr>
</tbody>
</table>

**Return Value**

The value of the field as a **CosObj**. If the field has no value, a NULL **CosObj** is returned.

**Header File**

`AF_Sel.h`

**Related Methods**

- `AFPDDFieldGetCosObj`
- `AFPDDFieldGetDefaultTextAppearance`
- `AFPDDFieldGetName`
- `AFPDDFieldSetValue`

**Example**

This example shows how to obtain the string value of an encoded string from the **CosObj**.

```c
PDFIELD fldP;
CosObj fieldCosValue = AFPDFieldGetValue(fldP);
char *fieldValue = CosCopyStringValue(fieldCosValue, NULL);
ASTEXT astText = ASTEXTFromPDText(fieldValue);
char *realField = ASTEXTGetEncodedCopy(astText, (ASHostEncoding)PDGetHostEncoding());
```
**AFPFieldIsAnnot**

```c
ASBool AFPFieldIsAnnot (PDField fldP);
```

**Description**

Determines whether or not a `PDField` is an annotation (`PDAnnot`), that is, whether the field dictionary is also an annotation. If this is the case, the value of `Subtype` is `Widget`.

**Parameters**

- `fldP` The field in question.

**Return Value**

- `true` if the `PDField` is an Acrobat annotation, `false` otherwise.

**Header File**

`CosField.h`

**Related Methods**

- `AFPFieldIsTerminal`
- `AFPFieldIsValid`

**Example**

```c
PDField fldP;

if (AFPFieldIsAnnot (fldP)) {
    /* Process annotation */
```
**AFPDFieldIsTerminal**

`ASBool AFPDFieldIsTerminal (PDField fldP);`

**Description**

Determines whether a field is terminal: the field has no children or it has the same name as its children.

**Parameters**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>fldP</td>
<td>The PDField to test.</td>
</tr>
</tbody>
</table>

**Return Value**

If `true`, `fldP` is valid and all its children (if any) have the same name as `fldP`. Otherwise all have unique names.

**Header File**

`AF_Sel.h`

**Related Methods**

- `AFPDFieldIsAnnot`
- `AFPDFieldIsValid`

**Example**

```c
PDField fldP;

if (AFPDFieldIsTerminal (fldP)) {
    /* Process field */
```
**AFPDFieldIsValid**

```c
ASBool AFPDFieldIsValid (PDField fldP);
```

**Description**

Determines whether a field is valid or not.

**Note:** This method is intended only to ensure that the field has not been deleted, not to ensure that all necessary information is present and the field has valid values.

**Parameters**

- `fldP` The field to test.

**Return Value**

- `true` if `fldP` is a valid `PDField`; `false` otherwise.

**Header File**

`AF_Sel.h`

**Related Methods**

- `AFPDFieldIsAnnot`
- `AFPDFieldIsTerminal`

**Example**

```c
PDField fldP;

if (AFPDFieldIsValid (fldP)) {
    /* Process field */
}
```
**AFPDFieldReset**

```c
void AFPDFieldReset (PDField fldP);
```

**Description**

Sets a `PDField`'s value to its default state. This is the value associated with the `DV` key for the field. If there is no `DV` key for the field, set the field’s value to the `NULL` Cos object; or, if the field has options, the default `DV` is the first element of the `Opt` array.

A `DV` entry’s value can be inherited from a parent (just like `V`).

The `PDField`'s value is set only if it is terminal; see `AFPDFieldIsTerminal`.

**Parameters**

- `fldP` The `PDField` to reset.

**Return Value**

None

**Header File**

`AF_Sel.h`

**Related Methods**

- `ResetForm`

**Example**

```c
AVDoc currentAVDoc;
PDField annotField;

/* Remove current field selection, so selected field is operated on */
currentAVDoc = AVAppGetActiveDoc ();
AFPDFieldReset (annotField);
```
AFPDFieldSetDefaultTextAppearance

```c
void AFPDDeviceDefaultTextAppearance(PDField fldP,
   TextAppearanceP aP);
```

**Description**
Sets the default text appearance of a field. Use this method to set the font, size, color, and so forth.

**Parameters**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>fldP</code></td>
<td>The <code>PDField</code> object for which to set the text appearance.</td>
</tr>
<tr>
<td><code>aP</code></td>
<td>A pointer to a structure describing the text appearance to set.</td>
</tr>
</tbody>
</table>

**Return Value**
None

**Header File**
`AF_Sel.h`

**Related Methods**
`AFPDWidgetSetAreaColors`
AFPDFieldSetFlags

```c
void AFPDFieldSetFlags (PDField fldP, AF_Flags_t flagType,
                        AFPDFieldFlags_t flags);
```

**Description**

Sets the flags of type `flagType` for a `PDField`. The flags of a field’s children (if any) are also set.

**Parameters**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>fldP</code></td>
<td>The <code>PDField</code> for which to set flags and children’s flags.</td>
</tr>
<tr>
<td><code>flagType</code></td>
<td>The type of the flags to set. If <code>flagType</code> is <code>Flags_Annot</code> and the <code>PDField</code> is not an annotation, no flags are changed.</td>
</tr>
<tr>
<td><code>flags</code></td>
<td>The value of the flags.</td>
</tr>
</tbody>
</table>

**Return Value**

None

**Header File**

`AF_Sel.h`

**Related Methods**

- `AFPDFieldGetDefaultTextAppearance`
- `AFPDFieldSetOptions`
- `AFPDFieldSetValue`
**AFPDFieldSetOptions**

```c
RetCode AFPDFieldSetOptions (PDField fldP, CosObj array);
```

**Description**

Sets the options entry for a field. The options entry has the key `Opt` and represents a list of options for a choice field.

If the field is not valid, remove the options entry.

**Parameters**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>fldP</code></td>
<td>The <code>PDField</code> whose options are set.</td>
</tr>
<tr>
<td><code>array</code></td>
<td>The value to set in the options entry.</td>
</tr>
</tbody>
</table>

**Return Value**

Good if the operation succeeded, Bad otherwise.

**Header File**

`AF_Sel.h`

**Related Methods**

- `AFPDFieldSetFlags`
- `AFPDFieldSetValue`

**Example**

```c
const char cOption1[] = "Blue";
const char cOption2[] = "Red";
CosObj coOpts = CosNewArray(cd, false, 2);
CosObj coOpt = CosNewString(cd, false, cOption1, strlen(cOption1));
CosArrayPut(coOpts, 0, coOpt);
coOpt = CosNewString(cd, false, cOption2, strlen(cOption2));
CosArrayPut(coOpts, 1, coOpt);
AFPDFieldSetOptions(coOpts);
```
**AFPDFieldSetValue**

```c
void AFPDFieldSetValue (PDFIELD fldP, CosObj val);
```

**Description**

Sets the value for a `PDFIELD`. The value is stored in the field entry with the `V` key. Updates the display of the field and its namesakes; that is, fields with the same fully qualified names, if any. Changing the field dictionary’s value for the `V` entry directly does not change the appearance of the field, which is represented by the `AP` key.

**NOTE:** Setting the value of a radio button or combo box requires Cos-level programming. See the *PDF Reference* for details.

**Parameters**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>fldP</code></td>
<td>The field whose value is set.</td>
</tr>
<tr>
<td><code>val</code></td>
<td>The field’s new value. If it is different than the previous value, all previous instances of value keys (<code>V</code>) in the field’s dictionary and those of its namesakes (fields with the same fully qualified name) are removed.</td>
</tr>
</tbody>
</table>

**Return Value**

None

**Header File**

`AF_Sel.h`

**Related Methods**

- `AFPDFieldGetValue`
- `AFPDFieldSetFlags`
- `AFPDFieldSetOptions`

**Example**

```c
PDFIELD fldP;
CosDoc currentCosDoc;
CosObj cosObject, newString;
char *fieldName;
ASInt32 fieldNameLength;

cosObject = AFPDFieldGetCosObj (fldP);
currentCosDoc = CosObjGetDoc (cosObject);
fieldName = AFPDFieldGetName (fldP);
fieldNameLength = strlen (fieldName);
newString = CosNewString (currentCosDoc, false, fieldName,
  fieldNameLength);
AFPDFieldSetValue (fldP, newString);
```
**AFPDFormFromPage**

```c
CosObj AFPDFormFromPage (CosDoc cd, PDPage pdp);
```

**Description**

Creates an XObject form from a PDF page. A form XObject is a content stream that can be treated as a single graphics object. Use this method for importing PDF graphics into documents.

**Parameters**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>cd</code></td>
<td>The CosDoc that the XObject will be created in.</td>
</tr>
<tr>
<td><code>pdp</code></td>
<td>The PDPage that you want to create the XObject from.</td>
</tr>
</tbody>
</table>

**Return Value**

A Cos object pointing to the XObject on the PDF page.

**Header File**

`AF_Sel.h`

**Related Methods**

None
**AFPDWidgetGetAreaColors**

`void AFPDWidgetGetAreaColors(PDAnnot pdan, PDColorValue borderP, PDColorValue bkgndP);`

### Description

Gets the border and background colors of an annotation.

### Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>pdan</code></td>
<td>The annotation.</td>
</tr>
<tr>
<td><code>borderP</code></td>
<td><em>(Filled by the method)</em> A pointer to a structure representing the border color of the annotation.</td>
</tr>
<tr>
<td><code>bkgndP</code></td>
<td><em>(Filled by the method)</em> A pointer to a structure representing the background color of the annotation.</td>
</tr>
</tbody>
</table>

### Return Value

None

### Header File

`AF_Sel.h`

### Related Methods

`AFPDWidgetSetAreaColors`
AFPDWidgetGetBorder

`ASBool AFPDWidgetGetBorder(PDAnnot pdan, AFPDWidgetBorderRec pdwb);`

Description

Gets the border of an annotation.

Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>pdan</code></td>
<td>The annotation.</td>
</tr>
<tr>
<td><code>pdwb</code></td>
<td><em>(Filled by the method)</em> A pointer to a structure describing the form field appearance definitions for the outside border of an annotation.</td>
</tr>
</tbody>
</table>

Return Value

*true* if successful getting border, *false* otherwise.

Header File

*AF_Sel.h*

Related Methods

*AFPDWidgetSetAreaColors*
**AFPDWidgetGetRotation**

```c
ASAtom AFPDWidgetGetRotation (PDAnnot pdan);
```

**Description**

Gets the rotation of the annotation.

**Parameters**

| pdan | The annotation widget. |

**Return Value**

Returns a `ASAtom` object representing the annotation's rotation with respect to the page.

**Header File**

`AF_Sel.h`

**Related Methods**

None
**AFPDWidgetSetAreaColors**

```c
void AFPDWidgetSetAreaColors(PDAnnot pdan, PDColorValue borderP, PDColorValue bkgndP);
```

**Description**
Sets the border and background color of the annotation.

**Parameters**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>pdan</code></td>
<td>The annotation.</td>
</tr>
<tr>
<td><code>borderP</code></td>
<td>A pointer to a structure representing the border color of the annotation.</td>
</tr>
<tr>
<td><code>bkgndP</code></td>
<td>A pointer to a structure representing the background color of the annotation.</td>
</tr>
</tbody>
</table>

**Return Value**
None

**Header File**
`AF_Sel.h`

**Related Methods**
`AFPDWidgetGetAreaColors`
**AFPDWidgetSetBorder**

```c
void AFPDWidgetSetBorder(PDAnnot pdan,
                         AFPDWidgetBorderRec pdwb);
```

**Description**

Sets the border of an annotation.

**Parameters**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>pdan</td>
<td>The annotation whose change border appearance will be set.</td>
</tr>
<tr>
<td>pdwb</td>
<td>A pointer to a structure describing the form field appearance definitions for the outside border of an annotation. Possible border types are solid, dashed, beveled, inset, underline.</td>
</tr>
</tbody>
</table>

**Return Value**

None

**Header File**

`AF_Sel.h`

**Related Methods**

`AFPDWidgetSetAreaColors`
AcroForm Methods

AssembleFormAndImportFDF

PDDoc AssembleFormAndImportFDF (PDDoc pdCurrForm, 
CosDoc cdFDF, ASBool bAddToCurr);

Description

Constructs an Acrobat form from templates and imports an FDF file.

Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>pdCurrForm</td>
<td>The current form being viewed, if any, at the time cdFDF is being imported. This parameter can be NULL; if not NULL, then cdFDF can refer to templates in the current form, by omitting the F key in the TRef dictionary. Even if the F key is not NULL, it can be a relative path (as opposed to an absolute path), as long as pdCurrForm is not NULL.</td>
</tr>
<tr>
<td>cdFDF</td>
<td>The FDF file being imported.</td>
</tr>
<tr>
<td>bAddToCurr</td>
<td>If true (and pdCurrForm is not NULL), then instead of creating a new form, the templates spawn pages that are appended at the end of pdCurrForm (and the function returns pdCurrForm).</td>
</tr>
</tbody>
</table>

Return Value

The PDDoc for the newly-created form (or pdCurrForm, if bAddToCurr is true).

Header File

AF_Sel.h

Related Methods

ExportAsFDF
ExportAsFDFEx
ExportAsFDFWithParams
ImportAnFDF

Example

CosObj dictFDF = CosDictGet(CosDocGetRoot(cdFDF), FDF_K);
if (CosObjGetType(CosDictGet(dictFDF, Pages_K)) == CosArray)
AssembleFormAndImportFDF(0/*no current doc is open*/, cdFDF, false);
**ExportAsFDF**

```
CosDoc ExportAsFDF (PDDoc pdForm, CosObj rgIncExcFlds,
ASBool bIncl, ASBool bEmpty, ASBool bMenu, ASBool bLoadFields,
ASPathName fdfPath);
```

**Description**

Exports form data to a CosDoc, which can be written to an FDF file. See the *PDF Reference* for a description of this format.

To create an FDF file from this CosDoc, call the Core API method `CosDocSaveToFile`.

**Note:** `ExportAsFDFWithParams` provides the same functionality with additional options.

**Parameters**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>pdForm</td>
<td>The PDDoc for the form for which we want to export the data.</td>
</tr>
<tr>
<td>rgIncExcFlds</td>
<td>If <code>rgIncExcFlds</code> is <code>CosNewNull</code>, then all fields are exported, and <code>bIncl</code> is ignored. If <code>rgIncExcFlds</code> is a <code>CosArray</code>, then the array elements may be:</td>
</tr>
<tr>
<td></td>
<td>a) names of fields (the names may be of non-terminal fields, which is a fast and easy way to cause all their children to be included in the FDF file).</td>
</tr>
<tr>
<td></td>
<td>b) arrays, whose first element is a field name, and the rest of the elements are field dictionary key names whose values should be exported in the FDF file.</td>
</tr>
<tr>
<td></td>
<td>For example: <code>[(My listbox) /AP /Opt]</code>. This variety of <code>rgIncExcFlds</code> array element can only be used if <code>bIncl</code> is <code>true</code> (see below).</td>
</tr>
<tr>
<td></td>
<td>c) If <code>rgIncExcFlds</code> contains a single element, which is itself an array as described in b) above, and its first element, which corresponds to the field name, is <code>NULL</code>, then the FDF file will include the requested field properties of all fields. For example: <code>[null /F /Ff]</code>.</td>
</tr>
<tr>
<td>bIncl</td>
<td>If <code>true</code>, <code>rgIncExcFlds</code> is an array of the fields to export. Otherwise, <code>rgIncExcFlds</code> is an array of the fields to exclude from exporting.</td>
</tr>
<tr>
<td>bEmpty</td>
<td>If <code>true</code>, all fields selected per the above criteria are exported. If <code>false</code>, exclude fields that have no value.</td>
</tr>
<tr>
<td>bMenu</td>
<td>If <code>true</code>, suppresses saving text fields that have the “password” flag set, and does not force filling-in required fields when creating an FDF file.</td>
</tr>
</tbody>
</table>
### Return Value

The FDF CosDoc containing the exported data.

### Exceptions

Raises `gAFpdErrExportFdf` if it cannot export field data. The viewer may raise other exceptions.

### Header File

`AF_Sel.h`

### Related Methods

- `ExportAsFDFEx`
- `ExportAsFDFWithParams`
- `ImportAnFDF`
- `AssembleFormAndImportFDF`

### Example

```c
/* Export all fields to CosDoc */
cosDoc = ExportAsFDF (currentPDDoc, rgFld, true, true, false, false, ffdPath, NULL);
```
ExportAsFDFEx

CosDoc ExportAsFDFEx (PDDoc pdForm, CosObj rgIncExcFlds, ASBool bIncl, ASBool bEmpty, ASBool bMenu, ASBool bLoadFields, ASPathName fdfPath, const char* submitBtnName);

Description

Exports form data to a CosDoc, which can be written to an FDF file. See the PDF Reference for a description of this format.

To create an FDF file from this CosDoc, call the Acrobat viewer plug-in API method CosDocSaveToFile.

**NOTE:** This method is the same as ExportAsFDF, with the exception of the additional parameter submitBtnName. ExportAsFDFWithParams provides the same functionality with additional options.

Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>pdForm</td>
<td>A PDDoc for the form whose data is exported.</td>
</tr>
<tr>
<td>rgIncExcFlds</td>
<td>If rgIncExcFlds is CosNewNull, then all fields are exported, and bIncl is ignored. If rgIncExcFlds is a CosArray, then the array elements may be: a) names of fields (the names may be of non-terminal fields, which is a fast and easy way to cause all their children to be included in the FDF file). b) arrays, whose first element is a field name, and the rest of the elements are field dictionary key names whose values should be exported in the FDF file. For example: [(My listbox)/AP/Opt]. This variety of rgIncExcFlds array element can only be used if bIncl is true (see below). c) If rgIncExcFlds contains a single element, which is itself an array as described in b) above, and its first element, which corresponds to the field name, is NULL, then the FDF file will include the requested field properties of all fields. For example: [null/F/Ff].</td>
</tr>
<tr>
<td>bIncl</td>
<td>If true, rgIncExcFlds is an array of the fields to export. Otherwise, rgIncExcFlds is an array of the fields to exclude from exporting.</td>
</tr>
<tr>
<td>bEmpty</td>
<td>If true, all fields selected per the above criteria are exported. If false, exclude fields that have no value.</td>
</tr>
</tbody>
</table>
**AcroForm Methods**

### bMenu

If **true**, suppresses saving text fields that have the “password” flag set, and doesn’t force filling-in required fields when creating an FDF file.

### bLoadFields

Not used.

### fdfPath

The path where the FDF file will be saved after it is produced. You need this in order to create an FDF file with an **F** key that gives the relative path to the form, from the location where the FDF file will be saved. Pass **NULL** if an absolute pathname is desired.

### submitBtnName

A **NULL**-terminated string containing the name of the button used to submit. If the value passed is not **NULL**, then the FDF file will include a field dictionary corresponding to the submit button, which will only contain one key, namely **T**.

**NOTE:** This dictionary is no different than the one you get when an AcroForm has an empty text field (that is, no value), and parameter **bEmpty** is true.

---

**Return Value**

The FDF **CosDoc** containing the exported data.

**Exceptions**

 Raises **gAFpdErrExportFdf** if it cannot export field data. The viewer may raise other exceptions.

**Header File**

**AF_Sel.h**

**Related Methods**

- **ExportAsFDF**
- **ExportAsFDFWithParams**
- **ImportAnFDF**
- **AssembleFormAndImportFDF**

**Example**

```c
/* Export all fields to CosDoc */
cosDoc = ExportAsFDFEx (currentPDDoc, rgFld, true, true, false, false, NULL, NULL);
```
ExportAsFDFWithParams

```
CosDoc ExportAsFDFWithParams (ExportAsFDFParamsRec params);
```

**Description**

Exports form data to a `CosDoc`, which can be written to an FDF file. See the *PDF Reference* for a description of this format.

**Parameters**

- `params` — An `ExportAsFDFParamsRec` structure.

**Return Value**

The FDF `CosDoc` containing the exported data.

**NOTE:** Call `CosDocSaveToFile` to create an FDF file from this `CosDoc`.

**Exceptions**

Raises `gAFpdErrExportPdf` if cannot export field data. The viewer may raise other exceptions.

**Header File**

`AF_Sel.h`

**Related Methods**

- `ExportAsFDF`
- `ExportAsFDFEx`
- `ImportAnFDF`
- `AssembleFormAndImportFDF`
ExportAsHtml

```c
void ExportAsHtml (PDDoc formPD, CosObj rgIncExcFlds, 
ASBool bIncl, ASBool bEmpty, ASFile Hfile);
```

**Description**

Exports data from a form to a file in HTML format.

**Parameters**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>formPD</td>
<td>The PDDoc for the form whose data is exported.</td>
</tr>
<tr>
<td>rgIncExcFlds</td>
<td>If rgIncExcFlds is CosNewNull, then all fields are exported, and bIncl is ignored. If it is a CosArray, then the array elements must be indirect references to field dictionaries.</td>
</tr>
<tr>
<td>bIncl</td>
<td>If true, rgIncExcFlds is an array of the fields to export. Otherwise, rgIncExcFlds is an array of the fields to exclude from exporting.</td>
</tr>
<tr>
<td>bEmpty</td>
<td>If true, all fields selected per the above criteria are exported. If false, exclude fields that have no value.</td>
</tr>
<tr>
<td>Hfile</td>
<td>File to which the HTML data is written.</td>
</tr>
</tbody>
</table>

**Return Value**

None

**Header File**

AF_Sel.h

**Related Methods**

ExportAsHtmlEx
ExportAsHtmlEx

void ExportAsHtmlEx (PDDoc pdForm, CosObj rgIncExcFlgs, 
ASBool bIncl, ASBool bEmpty, ASFile Hfile, 
const char* submitBtnName);

Description

Exports data from a form to a file in HTML format.

NOTE: This method is the same as ExportAsHtml, with the exception of the additional parameter submitBtnName.

Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>pdForm</td>
<td>The PDDoc for the form whose data is exported.</td>
</tr>
<tr>
<td>rgIncExcFlgs</td>
<td>If rgIncExcFlgs is CosNewNull, then all fields are exported, and bIncl is ignored. If it is a CosArray, then the array elements must be names of fields. The names may be of non-terminal fields, which is a fast and easy way to cause all their children to be exported.</td>
</tr>
<tr>
<td>bIncl</td>
<td>If true, rgIncExcFlgs is an array of the fields to export. Otherwise, rgIncExcFlgs is an array of the fields to exclude from exporting.</td>
</tr>
<tr>
<td>bEmpty</td>
<td>If true, all fields selected per the above criteria are exported. If false, exclude fields that have no value.</td>
</tr>
<tr>
<td>Hfile</td>
<td>File to which the HTML data is written.</td>
</tr>
<tr>
<td>submitBtnName</td>
<td>A NULL-terminated string containing the name of the button used to submit. If the value passed is not NULL, then include &quot;. . . submitBtnName=&amp; . . .&quot; as part of the generated x-www-form-urlencoded output.</td>
</tr>
</tbody>
</table>

NOTE: This type of output is the same one you get when an AcroForm has an empty text field (that is, no Value), and parameter bEmpty is true.

Return Value

None

Header File

AF_Sel.h
Related Methods

- ExportAsHtml
- ImportAnFDF
ImportAnFDF

\textbf{ASBool ImportAnFDF (PDDoc pdForm, CosDoc cdFDF);} \\

\textbf{Description} \\
Imports data from an FDF file into a PDDoc's form. See the \textit{PDF Reference} for a description of this format.

\textbf{Parameters} \\
\begin{tabular}{|l|l|} \\
\hline pdForm & The PDDoc for the form into which we want to import the data. \\
\hline cdFDF & The CosDoc for the FDF file containing the data. \\
\hline
\end{tabular}

\textbf{Return Value} \\
\texttt{true} if the fields in the FDF file only contained values or flags (that is, \texttt{V, F, Ff, ClrF, ClrFf, SetF, SetFf}), \texttt{false} if any field contained other attributes, such as appearances (that is, \texttt{AP}), actions (that is, \texttt{A}), and so forth.

\textbf{Exceptions} \\
Raises \texttt{gAFpdErrBadFdf} if the FDF file is invalid. \\
Raises an exception if memory cannot be allocated for FDF file data.

\textbf{Header File} \\
\texttt{AF_Sel.h}

\textbf{Related Methods} \\
\texttt{AssembleFormAndImportFDF} \texttt{ExportAsFDF} \texttt{ExportAsFDFEx} \texttt{ExportAsFDFWithParams}
IsPDDocAcroForm

```c
ASBool IsPDDocAcroForm (PDDoc doc);
```

**Description**
Indicates whether a PDDoc contains an Acrobat form.

**Parameters**

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>doc</td>
<td>The PDDoc to test.</td>
</tr>
</tbody>
</table>

**Return Value**
true if doc contains a form, false otherwise.

**Header File**
AcroForm.h

**Related Methods**
AFPDFieldIsValid

**Example**
```c
/* Return true if active doc has form */
if ((avDoc = AVAppGetActiveDoc ()) != NULL)
return IsPDDocAcroForm (AVDocGetPDDoc (avDoc));
```
ResetForm

```c
void ResetForm (PDDoc formPD, CosObj rgIncExcFlds,
               ASBool bIncl);
```

**Description**

Resets the indicated fields of a PDDoc's form to their default values. A PDField's value is reset only if it is terminal; see AFPDFieldIsTerminal.

**Parameters**

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>formPD</td>
<td>The PDDoc for the form whose fields are reset.</td>
</tr>
<tr>
<td>rgIncExcFlds</td>
<td>If rgIncExcFlds is CosNewNull, then all fields are reset, and bIncl is ignored. If it is a CosArray, then the array elements must be names of fields. The names may be of non-terminal fields, which is a fast and easy way to cause all their children to be reset.</td>
</tr>
<tr>
<td>bIncl</td>
<td>If true, rgIncExcFlds is an array of the fields to reset. Otherwise, rgIncExcFlds is an array of the fields to exclude from resetting.</td>
</tr>
</tbody>
</table>

**Return Value**

None

**Header File**

AF_Sel.h

**Related Methods**

AFPDFieldSetDefaultTextAppearance

**Example**

```c
AVDoc currentAVDoc;
PDDoc currentPDDoc;
CosObj rgFld = CosNewNull ();

ResetForm (currentPDDoc, rgFld, (ASBool)true);
```
AcroForm Callbacks

**AFPDFieldEnumProc**

```c
ACCB1 ASBool ACCB2 AFPDFieldEnumProc (PDField fldP, void *clientData);
```

**Description**

Callback used by `AFPDFDocEnumPDFFields`. It is called once for each `PDField` in a form.

**Parameters**

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>fldP</code></td>
<td>The <code>PDField</code> currently being enumerated.</td>
</tr>
<tr>
<td><code>clientData</code></td>
<td>User-supplied data passed in the call to <code>AFPDFDocEnumPDFFields</code>.</td>
</tr>
</tbody>
</table>

**Return Value**

`true` to continue the enumeration, `false` to halt enumeration.

**Header File**

`AF_ExpT.h`

**Related Methods**

`AFPDFDocEnumPDFFields`
AcroForm Declarations

This chapter describes the data types and declarations used in the AcroForms API.

- AcroForm Data Types
- Core Data Types

AcroForm Data Types

The following are data type and values defined in the AcroForms API.

**AF_Flags_t**

typedef enum {
    Flags_Annot,
    Flags_Field,
    SetFlagsAnnot,
    ClrFlagsAnnot,
    SetFlagsField,
    ClrFlagsField,
    /* new in Acrobat 6.0 */
    FlagsIgnore
} AF_Flags_t;

**Description**

The type of flag to be set in `AFPDFFieldSetFlags`.

If `Flags_Annot`, `SetFlagsAnnot`, or `ClrFlagsAnnot` are specified and the `PDField` is not an annotation, no flags are changed. See the *PDF Reference* for more information on flags used for annotations.

**Values**

| Flags_Annot | Sets the flags defined in the F key of the annotation to the values specified in the flags parameter of `AFPDFFieldSetFlags`. |
| Flags_Field | Sets the flags defined in the Ff key of the form field to the values specified in the flags parameter of `AFPDFFieldSetFlags`. |
AcroForm Declarations

AcroForm Data Types

### AcroForm Declarations

#### AcroForm Data Types

<table>
<thead>
<tr>
<th>Method</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SetFlagsAnnot</strong></td>
<td>Sets the bits in the flags to those that are 1s in the <code>flags</code> parameter of <code>AFPDFieldSetFlags</code>.</td>
</tr>
<tr>
<td><strong>ClrFlagsAnnot</strong></td>
<td>Clears the bits in the flags to those that are 1s in the <code>flags</code> parameter of <code>AFPDFieldSetFlags</code>.</td>
</tr>
<tr>
<td><strong>SetFlagsField</strong></td>
<td>Sets the bits in the flags to those that are 1s in the <code>flags</code> parameter of <code>AFPDFieldSetFlags</code>.</td>
</tr>
<tr>
<td><strong>ClrFlagsField</strong></td>
<td>Clears the bits in the flags to those that are 1s in the <code>flags</code> parameter of <code>AFPDFieldSetFlags</code>.</td>
</tr>
<tr>
<td><strong>FlagsIgnore</strong></td>
<td>Does not change any flags for the field or annotation.</td>
</tr>
</tbody>
</table>

**Header File**

`AF_ExpT.h`

**Related Methods**

`AFPDFieldSetFlags`


**AFPDFieldBorder**

```c
typedef AFPDWidgetBorderRec AFPDFieldBorder;
```

**Description**

Field Border data type.

**Header File**

`AF_ExpT.h`

**Related Methods**

- `AFLayoutBorder`
- `AFLayoutText`
- `AFPDWidgetGetBorder`
- `AFPDWidgetSetBorder`
AFPDFieldFlags_t

typedef ASUns32 AFPDFieldFlags_t;

Description
Used for the value of flags set by AFPDFieldSetFlags.

Header File
AF_ExpT.h

Related Methods
AFPDFFieldSetFlags
**AFPDWidgetBorder**

**AFPDWidgetBorderRec**

```c
typedef struct _AFPDWidgetBorderRec {
    AFPDWidgetBorderStyle nStyle;
    ASInt32 nWidth;
} AFPDWidgetBorderRec; *AFPDWidgetBorder
```

**Description**

Form field appearance definitions for the outside border of an annotation.

**Members**

<table>
<thead>
<tr>
<th>Member</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>nStyle</td>
<td>Style of the border. Possible types are solid, dashed, beveled, inset, underline. See <a href="#">AFPDWidgetBorderStyle</a>.</td>
</tr>
<tr>
<td>nWidth</td>
<td>Width of the border.</td>
</tr>
</tbody>
</table>

**Header File**

`AF_ExpT.h`

**Related Methods**

- [AFLayoutBorder](#)
- [AFLayoutText](#)
- [AFPDWidgetGetBorder](#)
- [AFPDWidgetSetBorder](#)
**AFPDWidgetBorderStyle**

```c
typedef enum {
    AFPDWBSolid,
    AFPDWBdashed,
    AFPDWBBeveled,
    AFPDWBInset,
    AFPDWBUnderline,
    AFPDWPInvalid
} AFPDWidgetBorderStyle;
```

**Description**

Form field appearance definitions for the outside border of an annotation.

**Values**

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AFPDWBSolid</td>
<td>Strokes the entire perimeter of the widget with a solid line.</td>
</tr>
<tr>
<td>AFPDWBdashed</td>
<td>Strokes the entire perimeter of the widget with a dashed line.</td>
</tr>
<tr>
<td>AFPDWBBeveled</td>
<td>Equivalent to <strong>AFPDWBSolid</strong> style with an additional beveled (pushed-out appearance) border applied inside the solid border.</td>
</tr>
<tr>
<td>AFPDWBInset</td>
<td>Equivalent to <strong>AFPDWBBeveled</strong> style with an additional beveled (pushed-in appearance) border applied inside the solid border.</td>
</tr>
<tr>
<td>AFPDWBUnderline</td>
<td>Strokes the bottom portion of the widget with a underline styled line.</td>
</tr>
<tr>
<td>AFPDWPInvalid</td>
<td>Do not change border.</td>
</tr>
</tbody>
</table>

**Header File**

`AF_ExpT.h`

**Related Methods**

`AFLayoutBorder`
ExportAsFDFParams

ExportAsFDFParamsRec

typedef struct _t_ExportAsFDFParams {
    ASSize_t size;
    AVDoc avForm;
    PDDoc pdForm;
    CosObj rgIncExcFlds;
    ASBool bIncl;
    ASBool bEmpty;
    ASBool bExcludePasswd;
    ASBool bCheckReqd;
    ASAtom asaEncoding;
    ASPathName fdfPath;
    char* submitBtnName;
} ExportAsFDFParamsRec;

Description
A parameter block used in the call to ExportAsFDFWithParams.

Members

<table>
<thead>
<tr>
<th>Member</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>size</td>
<td>Size of the data structure. Must be set to sizeof (ExportAsFDFParamsRec).</td>
</tr>
<tr>
<td>avForm</td>
<td>The AVDoc for the form from which you want to export the data. You can pass NULL if the document does not have an AVDoc (that is, it is open only at the PD level).</td>
</tr>
<tr>
<td>pdForm</td>
<td>The PDDoc for the form from which you want to export the data.</td>
</tr>
</tbody>
</table>
### rgIncExcFlds

If `rgIncExcFlds` is `CosNewNull`, then all fields are exported, and `bIncl` is ignored. If it is a `CosArray`, then the array elements may be:

- Names of fields (the names may be of non-terminal fields, which is a fast and easy way to cause all their children to be included in the FDF file).
- Arrays, whose first element is a field name, and the rest of the elements are field dictionary key names whose values should be exported in the FDF file. For example, `[(My listbox) /AP /Opt]`.
- If `rgIncExcFlds` contains a single element, which is itself an array as described in b) above, and its first element, which corresponds to the field name, is `NULL`, then the FDF will include the requested field properties of all fields. For example: `[null /F /Ff]`.

This variety of `rgIncExcFlds` array element can only be used if `bIncl` is `true`.

### bIncl

If `true`, then `rgIncExcFlds` is an array of the fields to export. Otherwise, it is an array of the fields to exclude from exporting.

### bEmpty

If `true`, then all fields selected per the criteria above are exported. Otherwise, exclude those that have no value.

### bExcludePasswd

If `true`, will not include in the FDF text fields that have the "password" flag set.

### bCheckReqd

If `true`, an alert pops up if any required field is empty.

### asaEncoding

Encoding to use in the produced FDF file for the value of the `V` entry when it is a string. If `ASAtomNull` gets passed, then `ExportAsFDF` will determine which encoding to use. If `PDFDocEncoding` is passed, then do not do any encoding conversions and simply send `V` as is (which means, as `PDFDocEncoding` or Unicode). Other allowed values are `Shift_JIS`, `BigFive`, `GBK`, and `UHC`.

### fdfPath

Path where the FDF file will be saved (by the client) after it is produced (by `ExportAsFDFWithParams`). You need this in order to create an FDF file with an `/F` key that gives the relative path to the form, from the location where the FDF file will be saved. Pass `NULL` if you want an absolute pathname.
### submitBtnName

A NULL-terminated string containing the name of the button used to submit. If the value passed is not NULL, then the FDF file will include a field dictionary corresponding to the submit button, which will only contain one key, namely `/T`. This dictionary is no different than the one you get when an AcroForm has an empty text field (that is, no Value), and `bEmpty` is `true`.

### Header File

`AF_ExpT.h`

### Related Methods

- `ExportAsFDFWithParams`
RetCode

typedef enum {
    Good,
    Bad,
    Failed
} RetCode;

Description
A return code from functions.

Values

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Good</td>
<td>Indicates success.</td>
</tr>
<tr>
<td>Bad</td>
<td>Indicates possible parameter problem or other exception.</td>
</tr>
<tr>
<td>Failed</td>
<td>Indicates a failure.</td>
</tr>
</tbody>
</table>

Header File

AF_ExpT.h

Related Methods

AFPDFieldSetOptions
**TextAppearance**

**TextAppearanceP**

```c
typedef struct TextAppearance_t {
    ASFixed charSpacing;
    ASFixed wordSpacing;
    ASFixed horizontalScale;
    ASFixed leading;
    ASFixed textRise;
    ASFixed textSize;
    ASFixedMatrix textMatrix;
    PDColorValueRec strokeColor;
    PDColorValueRec fillColor;
    ASUns16 renderMode;
    ASUns16 quadding;
    ASAAtom baseFont;
    ASAAtom nameFont;
} *TextAppearanceP;
```

**Description**

A structure containing information about the text appearance of a field.

**Members**

<table>
<thead>
<tr>
<th>Member</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>charSpacing</td>
<td>The spacing between characters.</td>
</tr>
<tr>
<td>wordSpacing</td>
<td>The spacing between words.</td>
</tr>
<tr>
<td>horizontalScale</td>
<td>Horizontal scale.</td>
</tr>
<tr>
<td>leading</td>
<td>Leading.</td>
</tr>
<tr>
<td>textRise</td>
<td>Text rise.</td>
</tr>
<tr>
<td>textSize</td>
<td>Point size of text. When fixedZero, enables text autosizing.</td>
</tr>
<tr>
<td>textMatrix</td>
<td>Font matrix.</td>
</tr>
<tr>
<td>strokeColor</td>
<td>Pen color.</td>
</tr>
<tr>
<td>fillColor</td>
<td>Fill color.</td>
</tr>
<tr>
<td>renderMode</td>
<td>Mode.</td>
</tr>
<tr>
<td>quadding</td>
<td>Text justification.</td>
</tr>
</tbody>
</table>
AcroForm Declarations

AcroForm Data Types

<table>
<thead>
<tr>
<th>baseFont</th>
<th>Default font name.</th>
</tr>
</thead>
<tbody>
<tr>
<td>nameFont</td>
<td>Current font name.</td>
</tr>
</tbody>
</table>

Header File

AF_ExpT.h

Related Methods

AFLAYOUTText

Related Macros

Init_TextAppearanceP
Core Data Types

The following are data types from the Core API that are used in the AcroForms API.

PDColorSpace

Constants that specify the color space in which a color value is specified (for example, RGB or grayscale).

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. |

Related Structures

PDColorValue
PDColorValue

Data structure representing a color.

```c
typedef struct _t_PDColorValueRec {
    PDColorSpace space;
    ASFixed value[4];
} PDColorValueRec, *PDColorValue;
```

Members

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>space</td>
<td>The color space.</td>
</tr>
<tr>
<td>value</td>
<td>The color value. The number of elements needed in the <code>value</code> field depends on the color space type specified in the <code>space</code> field.</td>
</tr>
</tbody>
</table>

Related Structures

- `TextAppearanceP`

Related Methods

- `AFLAYOUTBorder`
- `AFPDWidgetGetAreaColors`
- `AFPDWidgetSetAreaColors`
PDRotate

Constant values that specify page rotation, in degrees. Used for routines that set and get the value of a page's Rotate key.

typedef ASEnum16 PDRotate;
enum {
    pdRotate0 = 0,
    pdRotate90 = 90,
    pdRotate180 = 180,
    pdRotate270 = 270
};

Related Methods
    AFLayoutNew
**Init_TextAppearanceP**

```c
#define Init_TextAppearanceP(aP) {
    memset(aP, 0, sizeof(values));
    (aP)->baseFont = ASAtomNull;
    (aP)->nameFont = ASAtomNull;
}
```

**Description**

Macro for setting text appearance.

**Header File**

`AF_ExpT.h`
SetDefaultTextAppearanceP

#define Init_TextAppearanceP(aP) {
memset(aP, 0, sizeof(values));
(aP)->baseFont = ASAtomFromString("Helvetica");
(aP)->textSize = AutoSize;
(aP)->horizontalScale = fixedHundred;
(aP)->renderMode = Fill_text;
(aP)->fillColor.space = PDDeviceGray;
(aP)->textMatrix.a = fixedOne;
(aP)->textMatrix.d = fixedOne;
(aP)->quadding = LeftQ;
}

Description

Macro for setting text appearance. This macro uses Helvetica as the default font.

Header File

AF_ExpT.h
TextAppearenceIsValid

#define TextAppearenceIsValid(aP) (\n(aP)->quadding <= RightQ && \n(aP)->renderMode <= Invisible_text && \n(aP)->baseFont != ASAtomNull && \n(aP)->textSize >= Autosize)

Description
Macro for checking whether a text appearance is valid.

Header File
AF_ExpT.h
The Acrobat Forms plug-in provides a speech server API implemented over the Windows Speech API (SAPI). It allows document vocalization via text-to-speech conversion to enable accessibility for people with visual and reading disabilities.

To implement this API, the Forms plug-in exports another Host Function Table (AcroTTS) in addition to its common AcroForms HFT. To use the AcroTTS HFT, a plug-in must do the following:

- Include the header file `TTSHFT.H`, which in turn includes `AFTTS_SEL.H`.
- Import the HFT using `ASExtensionMgrGetHFT` and assign the HFT returned by this call to a plug-in-defined global variable named `gAcroTTSHFT`. The easiest way to do this is to use the `Init_AcroTTSHFT` macro defined in `TTSHFT.h`.

**Note:** This API is also available through Acrobat’s JavaScript interface.
AFTTSGetNumberOfVoices

ASUns32 AFTTSGetNumberOfVoices();

Description
Gets the number of different speakers available to the current TTS engine.

Return Value
The number of speakers available.

Header File
AFTTS_Sel.h

Related Methods
AFTTSGetVoiceName
AFTTSGetPitch

ASUns32 AFTTSGetPitch();

Description

Gets the baseline pitch for the voice of a speaker.

Return Value

The baseline pitch. The valid range is from 0 to 10, with 5 being the default for the speaker.

Header File

AFTTS_Sel.h

Related Methods

AFTTSSetPitch
AFTTSGetSpeaker

char* AFTTSGetSpeaker();

Description
Gets the name of the current speaker.

Return Value
The name of the current speaker.

Header File
AFTTS_Sel.h

Related Methods
AFTTSSetSpeaker
AFTTSGetspeechRate

ASUns32 AFTTSGetspeechRate();

Description

Gets the speed at which text is being spoken by the TTS engine.

Return Value

The speed, in number of words per minute, at which text is being spoken.

Header File

AFTTS_SEL.h

Related Methods

AFTTSSetspeechRate
**AFTTSGetVoiceName**

```c
char* AFTTSGetVoiceName (ASInt32 index);
```

**Description**

Gets the voice name of any of the available speakers in the installed TTS engine.

**Parameters**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>index</td>
<td>The index of the speaker.</td>
</tr>
</tbody>
</table>

**Return Value**

The name of the voice.

**Header File**

`AFTTS_Sel.h`

**Related Methods**

`AFTTSSetSpeaker`
AFTTSGlobal

ASUns32 AFTTSGlobal();

Description
Gets the volume for the speaker.

Return Value
The volume. Valid values are from 0 (mute) to 10 (loudest). The default is 5.

Header File
AFTTS_Sel.h

Related Methods
AFTTSGlobal
AFTTSSIsAvailable

\texttt{ASBool AFTTSSIsAvailable();}

\textbf{Description}

Determines whether the TTS object is available and the Text-to-Speech engine can be used.

\textbf{NOTE:} Calling any method in this API causes the Forms plug-in to initialize TTS automatically, if an SAPI engine is installed on the system.

\textbf{Return Value}

true if the Text-to-Speech engine can be used, false otherwise.

\textbf{Header File}

AFTTS_Sel.h
**AFTTSPause**

```c
ASBool AFTTSPause();
```

**Description**
Immediately pauses TTS output on a TTS object. Playback of the remaining queued text can be resumed via `AFTTSResume`.

**Return Value**
- `true` if the speech engine is available, `false` otherwise.

**Header File**
- `AFTTS_Sel.h`

**Related Methods**
- `AFTTSResume`
**AFTTSQSilence**

```c
ASBool AFTTSQSilence (ASUns32 duration);
```

**Description**

Queues a period of silence into the text.

**Parameters**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>duration</td>
<td>The amount of silence in milliseconds.</td>
</tr>
</tbody>
</table>

**Return Value**

`true` if the speech engine is available, `false` otherwise.

**Header File**

`AFTTS_Sel.h`

**Related Methods**

- `AFTTSQSound`
- `AFTTSQueueTextData`
AFTTSQSound

ASBool AFTTSQSound (const char* soundName);

Description

Puts a sound into the queue. The sound can then be performed by AFTTSTalk.

Parameters

| soundName | The sound name. Names are: ActionCopy, ActionCut, ActionDelete, ActionPaste, DocActive, DocClose, DocOpen, DocPrint, DocSave, KeyEnd, KeyHome, and PageTurn. This list can be augmented by adding sound files to the SoundCues folder in Acrobat’s installation, in 22kHz 16-bit PCM .wav format. |

Return Value

true if the speech engine is available, false otherwise.

Header File

AFTTS_Sel.h

Related Methods

AFTTSQSilence
AFTTSQueueTextData
**AFTTSQueueTextData**

```c
ASBool AFTTSQueueTextData (const char* textdata, ASBool UseDefaultSpeaker);
```

**Description**

Puts text into the queue to be performed by **AFTTSTalk**.

**Parameters**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>textdata</td>
<td>The text that will be put into the queue.</td>
</tr>
<tr>
<td>UseDefaultSpeaker</td>
<td>Whether to use the default speaker.</td>
</tr>
</tbody>
</table>

**Return Value**

`true` if the speech engine is available, `false` otherwise.

**Header File**

`AFTTS_Sel.h`

**Related Methods**

- **AFTTSQSIlence**
- **AFTTSQSound**
AFTTSReset

ASBool AFTTSReset();

Description
Stops playback of the currently queued text, and flushes the queue. Resets all the properties of the TTS object to their default values.

**NOTE:** Text playback cannot be resumed via AFTTSResume.

Return Value
true if the speech engine is available, false otherwise.

Header File
AFTTS_Sel.h

Related Methods
AFTTSStop
**AFTTSResume**

```c
ASBool AFTTSResume();
```

**Description**

Resumes playback of text on a paused TTS object.

**Return Value**

- `true` if the speech engine is available, `false` otherwise.

**Header File**

`AFTTS_Sel.h`

**Related Methods**

- `AFTTSPause`
AFTTSSetPitch

```c
ASBool AFTTSSetPitch (ASUns32 pitch);
```

**Description**

Sets the baseline pitch for the voice of a speaker.

**Parameters**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>pitch</td>
<td>The baseline pitch. The valid range is from 0 to 10, with 5 being the default for the speaker.</td>
</tr>
</tbody>
</table>

**Return Value**

- `true` if the speech engine is available, `false` otherwise.

**Header File**

`AFTTS_Sel.h`

**Related Methods**

- [AFTTSSetPitch](#)
AFTTSSetSpeaker

    ASBool AFTTSSetSpeaker (const char* voiceName);

Description

Sets the current voice. Valid values are any of those enumerated via 
AFTTSGetVoiceName and AFTTSGetNumberOfVoices.

Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>voiceName</td>
<td>The speaker name.</td>
</tr>
</tbody>
</table>

Return Value

true if the speech engine is available, false otherwise.

Header File

AFTTS_SEL.h

Related Methods

AFTTSGetSpeaker
AFTTSSetSpeechRate

```c
ASBool AFTTSSetSpeechRate (ASUns32 speed);
```

**Description**
Sets the speed at which text is being spoken by the TTS engine.

**Parameters**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>speed</td>
<td>The speed in number of words per minute.</td>
</tr>
</tbody>
</table>

**Return Value**

`true` if the speech engine is available, `false` otherwise.

**Header File**

`AFTTS_Sel.h`

**Related Methods**

- `AFTTSSGetSpeechRate`
AFTTSSetVolume

ASBool AFTTSSetVolume (ASUns32 volume);

Description
Sets the speech volume.

Parameters

| volume | The volume. Valid values are from 0 (mute) to 10 (loudest). |

Return Value
true if the speech engine is available, false otherwise.

Header File
AFTTS_Sel.h

Related Methods
AFTTSSetVolume
AFTTSSStop

```c
ASBool AFTTSSStop();
```

**Description**

Stops playback of currently queued text, and flushes the queue. Playback of queued text cannot be resumed.

**Return Value**

- `true` if the speech engine is available, `false` otherwise.

**Header File**

`AFTTS_Sel.h`

**Related Methods**

- `AFTTSSReset`
AFTTSTalk

ASBool AFTTSTalk();

Description
Sends whatever is in the queue to be spoken by the SAPI TTS engine. If the text output had been paused, resumes playback of the queued text.

Return Value
true if the speech engine is available, false otherwise.

Header File
AFTTS_Sel.h

Related Methods
AFTTSTextQueueData
Description

The Acrobat Forms plug-in has been enhanced to work as an Automation server in the Win32 environment. Since the automation capabilities have been added to a plug-in, rather than an executable that can be directly launched, the following steps are necessary to access them from an Automation controller:

First instantiate the Acrobat application by using the VB `CreateObject` method. For example:

```
CreateObject("AcroExch.App")
```

This causes the Acrobat Forms plug-in to run, at which time it registers its class object with OLE. Then its main exposed object can be instantiated, that is:

```
CreateObject("AFormAut.App")
```

Presently, registration in the Windows registry (which is different from the class object registration described above) happens every time Acrobat loads the plug-in. Therefore, you have to run Acrobat at least once with the `AForm32.api` file in the plug-ins folder before its type library can be found for object browsing from within the Visual Basic environment. This is also necessary in order to allow early binding. Dim the program variables as the corresponding classes in `AFORMAUTLib`, and not simply `As Object`.

The object model was designed in accordance with the applicable standards and guidelines for document-centric applications from the *OLE Programmer’s Reference*. That manual uses the term *document* to describe whatever an application uses as a file or an individual entity of data (in our case a field).

**Note:** Neither Acrobat, nor the Acrobat Forms plug-in, are thread-safe, and therefore Acrobat Forms OLE Automation uses the single-threading model.

Contents

This reference contains the following sections:

- **OLE Automation Objects.** This section describes the Acrobat objects represented as OLE objects.
- **OLE Automation Methods.** This section describes each OLE method, including its parameters, return value, and related methods.
- **OLE Automation Properties.** This section details the properties that can be set in the various objects. Each property describes the key, the property type (for example, read-only), and the semantics.
Conventions

The syntax used in this reference follows that used in Microsoft Visual Basic references.

Exceptions

All methods and properties may return an exception. Some of the possible ones are standard OLE exceptions, such as:

- E_OUTOFMEMORY (0x8007000E)
- E_INVALIDARG (0x80070057)

These exceptions are not specifically called out in the descriptions of the methods and properties that appear below. Others are AcroForm-specific, and are listed in the following table.

The actual numeric value of the returned exception is assembled as an HRESULT, uses the FACILITY_ITF, and starts with decimal 512 (hex 0x0200), as recommended by Microsoft. For example, the numeric value of the exception AutErcNoForm is hex 0x80040201. The important part is the right-most hex 201, which is the first error in the enumeration below.

<table>
<thead>
<tr>
<th>Exception Name</th>
<th>Numeric Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AutErcNoDoc</td>
<td>1</td>
<td>No document is currently open in the Acrobat Viewer.</td>
</tr>
<tr>
<td>AutErcNotTerminal</td>
<td>2</td>
<td>This property or method applies to terminal fields, or their annotations.</td>
</tr>
<tr>
<td>AutErcNotToThisFieldType</td>
<td>3</td>
<td>This property or method is not applicable to this type of field.</td>
</tr>
</tbody>
</table>
OLE Automation Objects

**AFormApp**

*AFormApp* is the only object the controller can externally instantiate (that is, using *CreateObject*). All other objects must be created by navigating down the hierarchy with the methods and properties described in this document.

**Field**

A field in the document that is currently active in Acrobat.

**Fields**

A collection of all the fields in the document that are currently active in Acrobat at the time *Fields* is instantiated.

The Fields collection includes both *terminal* and *non-terminal* fields. A terminal field is one that either does not have children, or if it does, they are simply multiple appearances (that is, child annotations) of the field in question.

*NOTE:* If you instantiate a *Fields* object, and subsequently fields are manually added or removed using the Forms tool in Acrobat, the *Fields* object will no longer be in sync with the document. You must re-instantiate the *Fields* object.
OLE Automation Methods

Field

**PopulateListOrComboBox**

```cpp
void PopulateListOrComboBox (const VARIANT& arrItems,
const VARIANT& arrExportVal);
```

**Description**

Specifies the item names and optionally exports values for a field of type listbox or combobox.

**Parameters**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>arrItems</td>
<td>An array of strings, with each element representing an item name. <strong>Note:</strong> There is a limit of 64K for string data in a combo or list box control on Windows platforms. For Mac OS systems, the limit is 200 entries for the combo or list box control. Using more than these limits degrades performance and makes the control unusable.</td>
</tr>
<tr>
<td>arrExportVal</td>
<td><em>(Optional)</em> An array of strings, the same size as the first parameter, with each element representing an export value. <strong>Note:</strong> Some of the elements in <code>exportString</code> may be empty strings.</td>
</tr>
</tbody>
</table>

**Return Value**

None

**Exceptions**

Raises `AutoErcNotToThisFieldType` if the field is not of type listbox or combobox.

**Related Methods**

Add
SetBackgroundColor

```c
void SetBackgroundColor (LPCTSTR bstrColorSpace,
    float GorRorC, float GorM, float BorY, float K);
```

**Description**

Specifies the background color for a field. The background color is used to fill the field’s rectangle.

**Parameters**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>bstrColorSpace</td>
<td>Values are defined by using transparent, gray, RGB or CMYK color. Valid strings include (and must be spelled exactly as shown):</td>
</tr>
<tr>
<td></td>
<td>● T</td>
</tr>
<tr>
<td></td>
<td>● G</td>
</tr>
<tr>
<td></td>
<td>● RGB</td>
</tr>
<tr>
<td></td>
<td>● CMYK</td>
</tr>
<tr>
<td>GorRorC</td>
<td>Used if <code>bstrColorSpace</code> is set to T, G, or RGB. A float range between zero and one inclusive.</td>
</tr>
<tr>
<td>GorM</td>
<td>Used if <code>bstrColorSpace</code> is set to G. A float range between zero and one inclusive.</td>
</tr>
<tr>
<td>BorY</td>
<td>Used if <code>bstrColorSpace</code> is set to RGB. A float range between zero and one inclusive.</td>
</tr>
<tr>
<td>K</td>
<td>Used if <code>bstrColorSpace</code> is set to CMYK. A float range between zero and one inclusive.</td>
</tr>
</tbody>
</table>

**Return Value**

None

**Related Methods**

- SetBorderColor
- SetForegroundColor

**Example**

```c
Field.SetBackgroundColor "RGB", 0.7, 0.3, 0.6, 0
```
SetBorderColor

void SetBorderColor (LPCTSTR bstrColorSpace, float GorRorC, float GorM, float BorY, float K);

Description

Specifies the border color for a field. The border color is used to stroke the field’s rectangle with a line as large as the border width. The new border color is propagated to any child annotations underneath, so the field may be non-terminal.

Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>bstrColorSpace</td>
<td>A string specifying the color space. Valid strings include (and must be spelled exactly as shown):</td>
</tr>
<tr>
<td>GorRorC</td>
<td>Used if bstrColorSpace is set to T, G, or RGB. A float range between zero and one inclusive.</td>
</tr>
<tr>
<td>GorM</td>
<td>Used if bstrColorSpace is set to G. A float range between zero and one inclusive.</td>
</tr>
<tr>
<td>BorY</td>
<td>Used if bstrColorSpace is set to RGB. A float range between zero and one inclusive.</td>
</tr>
<tr>
<td>K</td>
<td>Used if bstrColorSpace is set to CMYK. A float range between zero and one inclusive.</td>
</tr>
</tbody>
</table>

Return Value

None

Related Methods

SetBackgroundColor
SetForegroundColor

Example

Field.SetBorderColor "RGB", 0.7, 0.3, 0.6, 0
OLE Automation Methods
Field

**SetButtonCaption**

```c
void SetButtonCaption (LPCTSTR bstrFace, LPCTSTR bstrCaption);
```

**Description**

The caption to be used for the appearance of a field of type button.

**Parameters**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
</table>
| `bstrFace`  | A string that specifies the face for which the caption will be used. Valid strings include.  
  - `N` is the Normal appearance  
  - `D` is the Down appearance  
  - `R` is the appearance for Rollover |
| `bstrCaption` | The caption for the button.  
  **NOTE:** If a button's layout is of type icon only, the caption is not used in generating its appearance. In addition, only the Normal face is displayed, unless the Highlight is of type push. |

**Return Value**

None

**Exceptions**

Raises **AutErcNotToThisFieldType** if the field is not of type button. The new appearance is propagated to any child annotations underneath; the field may be non-terminal.

**Related Methods**

- **SetButtonIcon**

**Example**

```c
Field.SetButtonCaption "D", "Submit Form"
```
**SetButtonIcon**

```c
void SetButtonIcon (LPCTSTR bstrFace, LPCTSTR bstrFullPath, short pageNum);
```

**Description**

Specifies the icon to be used for the appearance of a field of type button.

**Parameters**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>bstrFace</td>
<td>A string that specifies the face for which the icon will be used. Valid strings include:</td>
</tr>
<tr>
<td></td>
<td>● N is the Normal appearance</td>
</tr>
<tr>
<td></td>
<td>● D is the Down appearance</td>
</tr>
<tr>
<td></td>
<td>● R is the appearance for Rollover</td>
</tr>
<tr>
<td>bstrFullPath</td>
<td>The full pathname of the PDF file to be used as the source of the appearance.</td>
</tr>
<tr>
<td>pageNum</td>
<td>Used to select the page inside that PDF file (zero-based).</td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> If a button's layout is of type icon only, the caption is not used in generating its appearance. In addition, only the Normal face is displayed, unless the Highlight is of type push.</td>
</tr>
</tbody>
</table>

**Return Value**

None

**Exceptions**

Raises **AutErcNotToThisFieldType** if the field is not of type button. The new appearance is propagated to any child annotations underneath, so it is OK if the field is non-terminal.

**Related Methods**

- **SetButtonCaption**

**Example**

```c
Field.SetButtonIcon "N", "c:\Clipart.pdf", 0
```
SetExportValues

```cpp
void SetExportValues (const VARIANT& arrExportVal);
```

**Description**

Sets the export values for each of the annotations of a field of type radio button and checkbox.

For radio button fields, this is necessary to make the field work properly as a group, with the one button checked at any given time giving its value to the field as a whole.

For checkbox fields, unless an export value is specified, the default is used when the field is checked is Yes. When it is unchecked, its value is Off (this is also true for a radio button field when none of its buttons are checked).

**Parameters**

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>arrExportVal</td>
<td>An array of strings, which is expected to have as many elements as there are annotations in the field. The elements of the array are distributed among the individual annotations comprising the field using their tab order.</td>
</tr>
</tbody>
</table>

**Return Value**

None

**Exceptions**

Raises *AutErcNotToThisFieldType* if the field is not of type radio button or checkbox.

**Related Methods**

Add

**Example**

```vbnet
Dim arrExp(1) As String
arrExp(0) = "Visa"
arrExp(1) = "Mastercard"
Field.SetExportValues arrExp
```
**SetForegroundColor**

```c
void SetForegroundColor (LPCTSTR bstrColorSpace,
float GorRorC, float GorM, float BorY, float K);
```

**Description**

Specifies the foreground color for a field. It represents the text color for text, button, combobox, or listbox fields and the check color for checkbox or radio button fields.

**NOTE:** Parameters are similar to SetBorderColor and SetBackgroundColor except that transparent color space is not allowed.

**Parameters**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
</table>
| bstrColorSpace  | Values are defined by using transparent, gray, RGB or CMYK color. Valid strings include (and must be spelled exactly as shown):
|                 | - T: transparent                                                           |
|                 | - G: gray                                                                   |
|                 | - RGB                                                                       |
|                 | - CMYK                                                                      |
| GorRorC         | Used if bstrColorSpace is set to T, G, or RGB. A float range between zero and one inclusive. |
| GorM            | Used if bstrColorSpace is set to G. A float range between zero and one inclusive. |
| BorY            | Used if bstrColorSpace is set to RGB. A float range between zero and one inclusive. |
| K               | Used if bstrColorSpace is set to CMYK. A float range between zero and one inclusive. |

**Return Value**

None

**Related Methods**

- SetBackgroundColor
- SetBorderColor

**Example**

```c
Field.SetForegroundColor "CMYK", 0.25, 0.25, 0.25, 0.1
```
SetJavaScriptAction

```c
void SetJavaScriptAction (LPCTSTR bstrTrigger, 
LPCTSTR bstrTheScript);
```

**Description**

Sets the action of the field to be of type JavaScript. When using SetJavaScriptAction, within Visual Basic, you may use Chr(13) to add a <CR>, and Chr(9) for tabs, so that the function is nicely formatted.

**Parameters**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>bstrTrigger</td>
<td>A string that specifies the trigger for the action. Valid strings include: up, down, enter, exit, calculate, validate, format, keystroke.</td>
</tr>
<tr>
<td>bstrTheScript</td>
<td>The script itself. <strong>NOTE:</strong> If the trigger is calculate, an entry is added at the end of the calculation order array (see the CalcOrderIndex property).</td>
</tr>
</tbody>
</table>

**Return Value**

None

**Related Methods**

None

**Calculate Notes**

There is a simple calculate script supplied with Acrobat.

```c
AFSimple_Calculate(cFunction, cFields)
```

- `cFunction` is one of "AVG", "SUM", "PRD", "MIN", "MAX"
- `cFields` is the list of the fields to use in the calculation.
**Formatting Notes**

The following scripts and formats can be used for the *format* and *keystroke* triggers:

- **AFDate KeystrokeEx**
  - `AFDate_KeystrokeEx(cFormat)`
  - `AFDate_Format(cFormat)`
  - *cFormat* is one of:

- **AFTime Keystroke**
  - `AFTime_Keystroke(ptf)`
  - `AFTime_Format(ptf)`
  - *ptf* is the time format:
    - 0 = 24HR_MM [ 14:30 ]
    - 1 = 12HR_MM [ 2:30 PM ]
    - 2 = 24HR_MM_SS [ 14:30:15 ]
    - 3 = 12HR_MM_SS [ 2:30:15 PM ]

- **AFPercent Keystroke**
  - `AFPercent_Keystroke(nDec, sepStyle)`
  - `AFPercent_Format(nDec, sepStyle)`
  - *nDec* is the number of places after the decimal point;
  - *sepStyle* is an integer denoting whether to use a separator or not. If *sepStyle*=0, use commas. If *sepStyle*=1, do not separate.

- **AFSpecial Keystroke**
  - `AFSpecial_Keystroke(psf)`
  - `AFSpecial_Format(psf)`
  - *psf* is the type of formatting to use:
    - 0 = zip code
    - 1 = zip + 4
    - 2 = phone
    - 3 = SSN

- **AFNumber Format**
  - `AFNumber_Format(nDec, sepStyle, negStyle, currStyle, strCurrency, bCurrencyPrepend)`
  - `AFNumber_Keystroke(nDec, sepStyle, negStyle, currStyle, strCurrency, bCurrencyPrepend)`
  - *nDec* is the number of places after the decimal point;
  - *sepStyle* is an integer denoting whether to use a separator or not. If *sepStyle*=0, use commas. If *sepStyle*=1, do not separate.
- `negStyle` is the formatting used for negative numbers:
  0 = MinusBlack
  1 = Red
  2 = ParensBlack
  3 = ParensRed
- `currStyle` is the currency style - not used
- `strCurrency` is the currency symbol
- `bCurrencyPrepend` is true to prepend the currency symbol; false to display on the end of the number
OLE Automation Methods

Field

SetResetFormAction

    void SetResetFormAction (LPCTSTR bstrTrigger, long theFlags,
    const VARIANT& arrFields);

Description

Sets the action of the field to be of type ResetForm.

Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
</table>
| bstrTrigger | A string that specifies which trigger is used for the action. Valid strings include (and must be spelled exactly as shown):
- up (for Mouse Up)
- down (for Mouse Down)
- enter (for Mouse Enter)
- exit (for Mouse Exit) |
| theFlags | When 0 (Include), arrFields specifies which fields to include in the reset operation. When non-zero (Exclude), arrFields specifies which fields to exclude from the reset operation. |
| arrFields | (Optional) An array of strings for the fully-qualified names of the fields. Depending on the value of theFlags, these fields are included in or excluded from the reset operation. When the fields are included, the set can include the names of non-terminal fields, which is a fast and easy way to cause all their children to be included in the action. When not supplied, all fields are reset. |

Return Value

None

Related Methods

None
### SetSubmitFormAction

```c
void SetSubmitFormAction (LPCTSTR bstrTrigger,
                         LPCTSTR bstrTheURL, long theFlags, const VARIANT& arrFields);
```

**Description**

Sets the action of the field to be of type SubmitForm.

**Parameters**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
</table>
| `bstrTrigger` | A string that specifies which trigger is used for the action. Valid strings include (and must be spelled exactly as shown):
  - `up` (for Mouse Up)
  - `down` (for Mouse Down)
  - `enter` (for Mouse Enter)
  - `exit` (for Mouse Exit) |
| `bstrTheURL` | A string containing the URL. |
| `theFlags` | A collection of flags that define various characteristics of the action. **NOTE:** See Section 8.6 in the PDF Reference to learn how the binary value of this long is interpreted. |
| `arrFields` | *(Optional)* If passed, represents an array of strings for the fully-qualified names of the fields to submit when the action gets executed. If the array is interpreted as fields to submit (as opposed to exclude from submitting, depending on the least-significant bit in the flags), then it may include the names of non-terminal fields, which is a fast and easy way to cause all their children to be included in the submission.

If not passed, then the created action will not include a `/Fields` key.

**Return Value**

None

**Related Methods**

None
Fields

Add

LPDISPATCH Add (LPCTSTR bstrFieldName, LPCTSTR bstrFieldType,
short pageNum, float left, float top, float right,
float bottom);

Description

Adds a new field “on-the-fly” to the Acrobat form and to the Fields collection.

Returns the newly-created Field object. You can pass as parameter the name of an
existing field, as long as that field is the same type as the one being created.

This is useful in the following circumstances:

● For radio buttons to use the SetExportValues method to make the radio buttons
mutually exclusive.

● For fields that should have multiple appearances (that is, child annotations) in the
document.

Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>bstrFieldName</td>
<td>The fully-qualified name of the field.</td>
</tr>
<tr>
<td>bstrFieldType</td>
<td>Field type for the newly created field. Valid types are:</td>
</tr>
<tr>
<td></td>
<td>● &quot;text&quot;</td>
</tr>
<tr>
<td></td>
<td>● &quot;button&quot;</td>
</tr>
<tr>
<td></td>
<td>● &quot;combobox&quot;</td>
</tr>
<tr>
<td></td>
<td>● &quot;listbox&quot;</td>
</tr>
<tr>
<td></td>
<td>● &quot;checkbox&quot;</td>
</tr>
<tr>
<td></td>
<td>● &quot;radio button&quot;</td>
</tr>
<tr>
<td></td>
<td>● &quot;signature&quot;</td>
</tr>
<tr>
<td>pageNum</td>
<td>The page number (zero-based).</td>
</tr>
</tbody>
</table>

NOTE: When creating list or combo boxes, there is a limit of 64K for string data on Windows platforms. MacOS systems have a limit of 200 entries for the list or combo boxes. Using more than the limit degrades performance. You populate the fields of the list and combo boxes using the PopulateListOrComboBox method.
### Fields

Table:<br>
| left, top, right, bottom | These parameters are floats representing the left, top, right, and bottom coordinates of the field rectangle, measured in rotated page space; that is, [0,0] is always at the left bottom corner regardless of page rotation. |

#### Return Value

The newly-created **Field** object.

#### Related Methods

- PopulateListOrComboBox
- Remove

#### Example

```vbnet
Set Field = Fields.Add("payment", _ "radiobutton", 0, 100, 600, 130, 570)
```
AddDocJavascript

```c
void AddDocJavascript (LPCTSTR bstrScriptName,
                       LPCTSTR bstrTheScript);
```

**Description**

Adds a document-level JavaScript function to the PDF file. When using
`AddDocJavascript`, within Visual Basic, you can use `Chr(13)` to add a `<CR>`, and
`Chr(9)` for tabs, so that the function is nicely formatted.

**Parameters**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>bstrScriptName</td>
<td>The name of the function being added to the document.</td>
</tr>
<tr>
<td>bstrTheScript</td>
<td>The definition being added to the document.</td>
</tr>
</tbody>
</table>

**Return Value**

None

**Related Methods**

- `ExecuteThisJavascript`

**Example**

```vbnet
'Adding a document-level JavaScript function, to compute factorials:
Fields.AddDocJavaScript "Fact", _
"function Fact(n)" & Chr(13) & _
"{" & Chr(13) & _
Chr(9) & "if (n <= 0)" & Chr(13) & _
Chr(9) & Chr(9) & "return 1;" & Chr(13) & _
Chr(9) & "else" & Chr(13) & _
Chr(9) & Chr(9) & "return n * Fact(n - 1);" & Chr(13) & _
""
```

Acrobat Forms API Reference
**ExecuteThisJavascript**

CSTRING ExecuteThisJavascript (LPCTSTR bstrTheScript);

**Description**
Executes the specified JavaScript script.

**Parameters**

<table>
<thead>
<tr>
<th>bstrTheScript</th>
<th>A string containing a JavaScript script, which is executed by Acrobat in the context of the currently active document.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NOTE:</strong></td>
<td>See the Acrobat JavaScript Scripting Reference for information on event level values.</td>
</tr>
</tbody>
</table>

**Return Value**
Returns a result by assigning it to event value.

**Related Methods**
AddDocJavascript

**Example**

```javascript
Fields.ExecuteThisJavaScript "var f = _ this.getField("myButton");
f.delay = _ false;"
```

To get the return value in Visual Basic:

```vbnet
Dim cSubmitName As String
cSubmitName = Fields.ExecuteThisJavaScript
"event.value = this.getField("myField").submitButton;"
```
**OLE Automation Methods**

**Fields**

### ExportAsFDF

```cpp
void ExportAsFDF (LPCTSTR bstrFullPath,
                 LPCTSTR bstrSubmitButton, BOOL bEmptyFields,
                 const VARIANT& arrFields);
```

**Description**

Exports the data as FDF from an AcroForm.

**Parameters**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>bstrFullPath</td>
<td>A full pathname of the file to which the produced FDF file will be saved.</td>
</tr>
<tr>
<td>bstrSubmitButton</td>
<td>The name of an existing form field of type Button (in case you want it included in the FDF file, as if it had been used to trigger a <strong>SubmitForm</strong> action). You may pass an empty string.</td>
</tr>
<tr>
<td>bEmptyFields</td>
<td>A boolean to indicate whether fields with no value should be included in the produced FDF file.</td>
</tr>
<tr>
<td>arrFields</td>
<td><em>(Optional)</em> An array of strings representing the fully-qualified names of the fields to include in the FDF file. This array may include the names of non-terminal fields, which is a fast and easy way to cause all their children to be included in the FDF file.</td>
</tr>
</tbody>
</table>

**Return Value**

None

**Related Methods**

- [ImportAnFDF](#)
- [ExportAsHtml](#)

**Example**

```vbnet
Dim arrFields(1) As String
arrFields(0) = "name"
arrFields(1) = "address"
' This will create an FDF that includes 'name.last, name.first, address.street, 'etc., but only if they have a value 'since we are passing False for the 'bEmptyFields" parameter.
Fields.ExportAsFDF "C:\Temp\out.fdf", "", False, arrFields
```
ExportAsHtml

void ExportAsHtml (LPCTSTR bstrFullPath,
LPCTSTR bstrSubmitButton, BOOL bEmptyFields,
const VARIANT& arrFields);

Description

Exports the data as HTML from an AcroForm. This method is similar to ExportAsFDF. The only difference is that the form data is exported in URL-encoded format.

Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>bstrFullPath</td>
<td>A full pathname of the file to which the produced FDF file will be saved.</td>
</tr>
<tr>
<td>bstrSubmitButton</td>
<td>The name of an existing form field of type Button (in case you want it included in the FDF file, as if it had been used to trigger a SubmitForm action). You may pass an empty string.</td>
</tr>
<tr>
<td>bEmptyFields</td>
<td>A boolean to indicate whether fields with no value should be included in the produced FDF file.</td>
</tr>
<tr>
<td>arrFields</td>
<td>(Optional) An array of strings representing the fully-qualified names of the fields to include in the FDF file. This array may include the names of non-terminal fields, which is a fast and easy way to cause all their children to be included in the FDF file.</td>
</tr>
</tbody>
</table>

Return Value

None

Related Methods

ExportAsFDF
**ImportAnFDF**

```c
void ImportAnFDF (LPCTSTR bstrFullPath);
```

**Description**
Imports the FDF file to an AcroForm.

**Parameters**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>bstrFullPath</td>
<td>The full pathname of the file containing the FDF file to import.</td>
</tr>
</tbody>
</table>

**Return Value**
None

**Related Methods**

- ExportAsFDF
**Remove**

```c
void Remove (LPCTSTR bstrFieldName);
```

**Description**

Removes a field from the Acrobat Form and from the *Fields* collection.

**Parameters**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>bstrFieldName</code></td>
<td>The fully-qualified name of the field to remove from the Acrobat form. If the field has multiple child annotations, all of them are removed. If multiple fields have the same name, all are removed.</td>
</tr>
</tbody>
</table>

**Return Value**

None

**Related Methods**

- Add

**Example**

```
'Remove fields you no longer used.
Fields.Remove("MyOldField")
```
**Field**

### Alignment

**[get/set] String**

**Description**

The text alignment of a text field. Valid alignments are (must be spelled exactly as shown):

- left
- center
- right

**Return Value**

If the field is terminal, and has multiple child annotations, a get returns the alignment for the first child, whichever annotation that happens to be.

On a set, the property is propagated to any child annotations underneath, so the field may be non-terminal.

**Exceptions**

- If the field is not of type text, an exception `AutErcNotToThisFieldType` is returned.
- On a get, if the field is non-terminal, an exception `AutErcNotTerminal` is returned.

**Example**

```plaintext
Field.Alignment = left
```
**BorderStyle**

[get/set] String

**Description**

The border style for a field. Valid border styles include solid, dashed, beveled, inset, and underline (and must be spelled exactly as shown).

**Return Value**

If it is terminal, and has multiple child annotations, a get returns the value of the border style for the first child, whichever annotation that happens to be.

On a set, the property is propagated to any child annotations underneath, so the field may be non-terminal.

**Exceptions**

On a get, raises `AutErcNotTerminal` if the field is non-terminal, an exception is returned.

**Example**

```
Field.BorderStyle = "beveled"
```
BorderWidth

[get/set] short

Description
The thickness of the border when stroking the perimeter of a field’s rectangle. If the border color is transparent, this property has no effect except in the case of a beveled border. The value 0 represents no border, and the value 3 is a thick border.

Return Value
If it is terminal, and has multiple child annotations, a get returns the value of the border width for the first child, whichever annotation that happens to be.
On a set, the property is propagated to any child annotations underneath, so the field may be non-terminal.

Exceptions
On a get, if the field is non-terminal, an exception AutErcNotTerminal is returned.

Example
Field.BorderWidth = 1
**ButtonLayout**

[get/set] short

**Description**

The layout appearance of a button. Valid values include:

- 0 - text only; the button has a caption but no icon.
- 1 - icon only; the button has an icon but no caption.
- 2 - icon over text; the icon should appear on top of the caption.
- 3 - text over icon; the text should appear on top of the icon.
- 4 - icon then text; the icon should appear to the left of the caption.
- 5 - text then icon; the icon should appear to the right of the caption.
- 6 - text over icon; the text should be overlaid on top of the icon.

If it is terminal, and has multiple child annotations, a get returns the layout for the first child, whichever annotation that happens to be.

On a set, the property is propagated to any child annotations underneath, so it is OK if the field is non-terminal.

**Exceptions**

If the field is not of type button, an exception **AutErcNotToThisFieldType** is returned.

On a get, if the field is non-terminal, an exception **AutErcNotTerminal** is returned.

**Example**

```pascal
Field.ButtonLayout = 2
```
CalcOrderIndex

[get/set] short

Description

The calculation order of fields in the document. It is zero-based. If you want the calculation for a field f2 to be performed after that for field f1, you need only set the CalcOrderIndex for f2 to f1’s CalcOrderIndex + 1. The elements in the calculation order array get shifted as necessary to make room for the insertion (but the first calculation is still at index 0).

See also the section “The calculation order array” in the document AcroJS.PDF (under the menu Help -> Forms -> JavaScript).

Example

Set F1 = Fields("SubTotal")
Set F2 = Fields("Total")
F2.CalcOrderIndex = F1.CalcOrderIndex + 1
CharLimit

[get/set] short

Description
The limit on the number of characters that a user can type into a text field.
On a set, the property is propagated to any child annotations underneath, if any.

Exceptions
If the field is not of type text, an exception AutErcNotToThisFieldType is returned.
**DefaultValue**

[get/set] String

**Description**

The default value of the field. It returns the empty string if the field has no default value. If the field is non-terminal, an exception `AutErcNotTerminal` is returned.

Setting a `DefaultValue` of `ON` for fields of type checkbox and radio button is equivalent to selecting “Default is checked” when you edit the properties of the field using the Forms tool in Acrobat. A `DefaultValue` of `OFF` is a default of unchecked.

See also `Value`. 
**Editable**

[get/set] Boolean

**Description**
Determines whether the user can type in a selection or must choose one of the provided selections. Comboboxes can be editable; that is, the user can type in a selection.
On a set, the property is propagated to any child annotations underneath, if any.

**Exceptions**
Returns an exception of `AutErcNotToThisFieldType` if the field is not of type combobox.

**Example**
Field.Editable = False
**Highlight**

[get/set] String

**Description**

Defines how a button reacts when a user clicks it. The four highlight modes supported are:

- none
- invert
- push
- outline

If it is terminal, and has multiple child annotations, a get returns the highlight for the first child, whichever annotation that happens to be.

On a set, the property is propagated to any child annotations underneath, so the field may be non-terminal.

**Exceptions**

If the field is not of type button, an exception `AutErcNotToThisFieldType` is returned.

On a get, if the field is non-terminal, an exception `AutErcNotTerminal` is returned.

**Example**

```plaintext
Field.Highlight = "invert"
```
IsHidden

[get/set] Boolean

Description

Controls whether the field is hidden or visible to the user. If the value is `true` the field is invisible, `false` the field is visible.

During get operations, if the field is non-terminal, an exception `AutErcNotTerminal` is returned. If it is terminal, and has multiple child annotations, a get returns the value of the hidden flag for the first child, whichever annotation that happens to be.

During set operations, the property is propagated to any child annotations underneath, so it is OK if the field is non-terminal.

Example

```
'Hide "name.last"
Set Field = Fields("name.last")
Field.IsHidden = True
```
IsMultiline

[get/set] Boolean

Description
Determines whether the text field is multi-line or single-line.
On a set, the property is propagated to any child annotations underneath, if any.

Exceptions
If the field is not of type text, an exception AutErcNotToThisFieldType is returned.

Example
Field.IsMultiline = True
IsPassword

[get/set] Boolean

Description
The property for the field to display asterisks for the data entered into the field. Upon submission, the actual data entered is sent. Fields that have the password attribute set will not have the data in the field saved when the document is saved to disk.

On a set, the property is propagated to any child annotations underneath, if any.

Exceptions
If the field is not of type text, an exception AutErcNotToThisFieldType is returned.

Example
Field.IsPassword = True
IsReadOnly

[get/set] Boolean

Description
The read-only characteristic of a field. When a field is read-only, the user can see the field but cannot change it. If a button is read-only, the user cannot press it to execute an action. Because this is a field flag and not an annotation flag, both a get and a set of this property are allowed regardless of whether the field is terminal or non-terminal.

● A get on a non-terminal field retrieves that field’s flag.
● A set changes the flag on all its terminal children.
IsRequired

[get/set] Boolean

Description
The required characteristic of a field. When a field is required, its value must be non-NULL when the user clicks a submit button that causes the value of the field to be sent to the web. If the field value is NULL, the user receives a warning message and the submit does not occur.

Since this is a field flag and not an annotation flag, both a get and a set of this property are allowed, regardless of whether the field is terminal or non-terminal.

A get on a non-terminal field retrieves that field’s flag.
A set changes the flag on all its terminal children.
**IsTerminal**

[read-only] Boolean

**Description**

true if the field is terminal, otherwise false.

**Example**

```vbnet
Dim Field As AFORMAUTLib.Field
Dim bTerminal As Boolean

'bTerminal should be True
bTerminal = Field.IsTerminal
```
**Name**

[read-only] String

**Description**

The fully qualified name of the field. It is the default member of the Field interface.
NoViewFlag

[get/set] Boolean

Description

Determines whether a given field prints but doesn't display on the screen.

Set the NoViewFlag property to true to allow the field to appear when the user prints the document but not when it displays on the screen; set it to false to allow both printing and displaying.

On a get, if the field is non-terminal, an exception AutErcNotTerminal is returned. If it is terminal, and has multiple child annotations, a get returns the value of the no-view flag for the first child, whichever annotation that happens to be.

On a set, the property is propagated to any child annotations underneath, so the field may be non-terminal.
PrintFlag

[get/set] Boolean

**Description**

Determines whether a field prints or not. Set the `PrintFlag` property to `true` to allow the field to appear when the user prints the document, set it to `false` to prevent printing.

On a get, if the field is non-terminal, an exception `AutErcNotTerminal` is returned. If it is terminal, and has multiple child annotations, a get returns the value of the print flag for the first child, whichever annotation that happens to be.

On a set, the property is propagated to any child annotations underneath, so the field may be non-terminal.
**Style**

[get/set] String

**Description**

The style of a checkbox or a radio button, that is, the glyph used to indicate that the checkbox or radio button has been selected.

Valid styles include (must be spelled exactly as shown):

- check
- cross
- diamond
- circle
- star
- square

If it is terminal, and has multiple child annotations, a get returns the style for the first child, whichever annotation that happens to be.

On a set, the property is propagated to any child annotations underneath, so it is OK if the field is non-terminal.

**Exceptions**

During set, if the field is not of type checkbox or radio button, an exception `AutErcNotToThisFieldType` is returned.

On a get, if the field is non-terminal, an exception `AutErcNotTerminal` is returned.

**Example**

```
Field.Style = "star"
```
**TextFont**

[get/set] String

**Description**

The text font used when laying out the field. Valid fonts include (and must be spelled exactly as shown):

- Courier
- Courier-Bold
- Courier-Oblique
- Courier-BoldOblique
- Helvetica
- Helvetica-Bold
- Helvetica-Oblique
- Helvetica-BoldOblique
- Symbol
- Times-Roman
- Times-Bold
- Times-Italic
- Times-BoldItalic
- ZapfDingbats

On a set, the property is propagated to any child annotations underneath, if any.

**Example**

Field.TextFont = "Times-BoldItalic"
**TextSize**

[get/set] short

**Description**

The text points size used in the field. In combobox and radio button fields, the text size determines the size of the check. Valid text sizes include zero and the range from 4 to 144 inclusive.

A text size of zero means that the largest point size that can still fit in the field's rectangle should be used (in multi-line text fields and buttons this is always 12 point).

On a set, the property is propagated to any child annotations underneath, if any.

**Example**

Field.TextSize = 18
**Type**

[read-only] String

**Description**

The type of the field as a string. Valid types that are returned:

- `text`
- `button`
- `combobox`
- `listbox`
- `checkbox`
- `radiobutton`
- `signature`

**Example**

```vba
Set Field = Fields("name.last")
'Should print "name.last"
print Field
'Should print the type of field. Example,
'"text"
print Field.Type
```
Value

[get/set] String

Description

A string that represents the value of the field. Returns the empty string if the field has no value. If the field is non-terminal, an exception AutErcNotTerminal is returned.

For fields of type checkbox, the value Off represents the unchecked state. The checked state is represented using the export value. This is also true for radio buttons (where each individual button in a group should have a different export value; see SetExportValues.) For fields of type listbox or combobox, if an export value is defined, then that represents the value, otherwise the item name is used.

These remarks apply also to DefaultValue.

Example

```vbnet
Dim arrExp(1) As String
arrExp(0) = "Visa"
arrExp(1) = "Mastercard"
Field.SetExportValues arrExp
Field.Value = arrExp(0)
```
**Fields**

**Count**

[read-only] long

**Description**

The number of items in the collection.

**Example**

```vba
dim field as aformautlib.field
dim nfields as long

nfields = fields.count

for each field in fields
    if field.isterminal then
        print field.value
    end if
next field
```
**Item**

[read-only] IDispatch*

**Description**

Takes the fully qualified name of the field (for example, "name.last") as a parameter, and returns the Field object for it. It is the default member of the Fields interface (that is, the property invoked if the object name is specified by itself without a property or a method in the controller script).

**Example**

```vba
Dim Field As AFORMAUTLib.Field
Dim nFields As Long

Set Field = Fields.Item("name.last")
'Since Item is the default property:
Set Field = Fields("name.last")
```
**_NewEnum**

[read-only] IUnknown*

**Description**

The IEnumVariant enumerator for the collection.

**NOTE:** You do not need to call this property directly. Visual Basic calls it in the background whenever the code contains a "For Each Field In Fields" loop. For example:

```vbp
For Each Field in Fields
    If Field.IsTerminal
        print Field.Value
    End If
Next Field
```