



Adobe® Acrobat® SDK

Version 8.1

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Introduction

The Adobe® Acrobat® 8.1 SDK is a set of tools that help you develop software that interacts with Acrobat 8.1 technology. The SDK contains header files, type libraries, simple utilities, sample code, and documentation.

For the benefit of previous users, this document summarizes the changes to the SDK in Adobe® Acrobat® 8.0 and 8.1. Unless otherwise indicated, changes apply to Acrobat 8.0.

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IDE Support

- On Microsoft® Windows®, the supported development environment is now Visual Studio 2005.
- On Mac OS, Xcode 2.3 is now supported and Mac OS X 10.4.3 or later is required. CodeWarrior is no longer supported. If you cannot upgrade to Xcode and need to use CodeWarrior, you should continue to use the Acrobat 7.0.5 SDK.

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3D Support

● U3D Elements Support

Beginning with Acrobat 8.1, the U3D data contained in PDF documents can include a more compressed form of mesh blocks that comply with Right Hemisphere Adobe 3D Compressed Mesh. The U3D data can also include U3D metadata and a standardized expression of units scaling factor data.

For information more information on U3D data and Right Hemisphere Adobe 3D Compressed Mesh, see *U3D Supported Elements*.

● **PRC Support**

Beginning with Acrobat 8.1, PDF files can include a new 3D file format called PRC. PRC is a highly compressed CAD visualization format. The PRC specification is available at www.adobe.com/go/acrobat3d_developer.

● **3D JavaScript API Changes**

For more information on the following changes, see *Developing Acrobat Applications Using JavaScript* and the *JavaScript for Acrobat 3D Annotations API Reference*.

(Acrobat 8.1) The following objects are new: `ScrollWheelEvent`, `ScrollWheelEventHandler`, `SelectionEvent`, and `SelectionEventHandler`.

(Acrobat 8.1) The `HitInfo` object has additional properties: `material`, `surfaceNormal`, `textureCoordinate`.

(Acrobat 8.1) The `Node` object has an additional property: `metadataString`

(Acrobat 7, but previously undocumented) The `Light` object has an additional property: `directionLocal`.

(Acrobat 8.1) The `Runtime` object has the additional properties: `canvasCount`, `overrideSpinTool`, `scrollWheelSpeed`, `speedThreshold`, `strafeSpeed`, and `walkSpeed`.

(Acrobat 8.0) The `Runtime` object has the additional property: `TOOL_NAME_SPIN`.

(Acrobat 8.1) The `Scene` object has the additional properties: `node` and `selected`.

(Acrobat 8.1) The following APIs have been deprecated:

- `CameraEvent.isNewCanvas` (a property)
- `Dummy` (an object)
- `Procedural` (an object)
- `SceneObject.objectGUID` (a property)
- `SceneObject.getByGUID` (a method)

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JavaScript Support

For more information on the following changes, see *Developing Acrobat Applications Using JavaScript* and the *JavaScript for Acrobat API Reference*.

Remember, this document summarizes the changes to the SDK in Adobe Acrobat 8.0 and 8.1. Unless otherwise indicated, changes apply to Acrobat 8.0.

● New APIs

- Web services (SOAP, RSS) are now handled by the `Net` object. This object forms a namespace for existing web services and for web services that use HTTP (REST). SOAP-related properties and methods are now under `Net.SOAP` and `Net.Discovery`. The `Net.HTTP` object allows access to web services that use HTTP.
- `Document.xfa` (was previously undocumented)
- `Document.XFAForeground`
- `Doc.exportAsFDFStr`
- `Doc.exportAsXFDFStr`

- New color-related APIs include `Doc.colorConvertPage`, `Doc.embedOutputIntent`, `Doc.getColorConvertAction`, and the `colorConvertAction` object.

● API Changes

- The `Certificate` object has additional properties: `privateKeyValidityEnd`, `privateKeyValidityStart`, `validityEnd`, and `validityStart`. (The last two were previously undocumented.)
- The `CertificateSpecifier` object has additional properties: `subjectDN`, `keyUsage`, and `urlType`.
- The `RDN` object has many new properties.
- The `SecurityHandler` object has several new properties: `docDecrypt`, `docEncrypt`, and `validateFDF`. (These properties were previously undocumented.)
- The `PrintParams` object has several new methods for handling booklet printing.
- The `SignatureInfo` object has a new property, `digestMethod`.
- The method `app.openDoc` has a new parameter, `cDest`.
- The method `Document.getLegalWarnings` no longer dirties the document (in other words, use of the method does not flag the document as having unsaved changes).
- The execution of menu items through the `execMenuItem` method is now restricted to a short list of safe menus. For more information, see “`execMenuItem`” under “`app` methods” in the *JavaScript for Acrobat API Reference*.
- As of Acrobat 8.1, there are new security restrictions on certain search and spell methods. For more information, see the *JavaScript for Acrobat API Reference*.

● **Support for E4X**

The new version of the JavaScript interpreter includes support for E4X, the ECMA-357 standard.

● **New Security Policy Preference**

In the JavaScript section of the Acrobat preferences, there is a new check box called Enable Global Object Security Policy (select Edit > Preferences > JavaScript).

When this preference is checked (the default), each time a global property is written, the origin that set it is remembered. Thereafter, only origins that match can access the variable. For files, this means that only the file that set the variable can access it. For documents from URLs, it means that only the host that set it can access the variable.

When not checked, documents from different origins can access the variable, which was the behavior in previous versions.

● **Use of Unsupported Calls**

Some undocumented and unsupported JavaScript calls are no longer accessible. Please contact Adobe Developer Support if these restrictions are problematic.

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Plug-in Support

The following changes may affect your plug-ins. For more information on these changes, see *Developing Plug-ins and Applications* and *Developing Applications Using Interapplication Communication*.

Remember, this document summarizes the changes to the SDK in Adobe Acrobat 8.0 and 8.1. Unless otherwise indicated, changes apply to Acrobat 8.0.

● Single Document Interface

Acrobat 8 and greater support a single document interface (SDI). This change in window behavior requires changes to some third-party plug-ins.

● Unicode Support

On Windows, Acrobat now supports Unicode-encoded file paths and file names. On Mac OS, Unicode was already supported by Acrobat 7.

● Other Plug-in Enhancements

- Acrobat and Adobe Reader 8.1 contain a list of menu items that can be executed using `ExecMenu`. Menu items not on the list cannot be executed programmatically. For more information, see “Determining if a menu item can be executed” in *Developing Plug-ins and Applications*.
- The Color Conversion API has been extended to include new APIs that enable you to add color conversion operations to your plug-in or PDF Library applications. By using this extended API, you can convert a page based on a list of conversion actions. Each conversion action contains a set of matching fields,

what the action should do if an object matches the matching fields, and conversion parameters.

- You can now optimize an active PDF document with the PDF optimizer API.
- The Acrobat core API and the PDF Library API are more closely aligned. PDF Library applications can now link to the PDF Library DLL file using HFTs.
- Using the Acrobat core API, you can now export data from PDF document objects to XML files. To retrieve data from a PDF document object, use the `PDDocExportUserProperties` method.

● API Changes

The following new APIs are available:

```
AABIsCertUnderAdobeRoot  
AFPDFFieldGetDefaultTextAppearanceEx  
AFPDFFieldSetDefaultTextAppearanceEx  
AFRegisterFormUIFrameworkHandler  
AFUnregisterFormUIFrameworkHandler  
ASFileSysGetStorageFreeSpace64  
ASFileSysIsLocal  
ASGetDefaultFileSysForPath  
ASGetDefaultUnicodeFileSys  
ASGetErrorStringASText  
ASRegisterErrorStringASText  
AVAppGetAnnotAppearancePadding  
AVDocSaveOptimized  
AVGetOptimizerParamsForPreset  
AVGetOptimizerPresets  
AVMenuItemIsScriptable  
AVSysTimeASTextFromTimeRec  
AVSysTrackMouse  
CosSetExternalFilePermissionProc  
PDAnnotGetTitleASText
```

PDAnnotSetTitleASText
PDBookmarkAddNewChildASText
PDBookmarkAddNewSiblingASText
PDBookmarkAddSubtreeASText
PDBookmarkGetByTitleASText
PDBookmarkGetTitleASText
PDBookmarkSetTitleASText
PDColorConvertPDEElement
PDDocGetCryptHandler
PDDocGetInfoASText
PDDocSetInfoAsASText
PDDocSetMinorVersion
PDEColorSpaceCreateInCosDoc
PDEContentSetDefaultColorSpace_PEWCalls_
PDEFontCreateFromSysFontAndEncodingInCosDoc
PDEFontCreateFromSysFontExInCosDoc
PDEFontCreateFromSysFontInCosDoc
PDEFontCreateInCosDoc
PDEFontCreateWithParamsInCosDoc
PDEFormGetBBox
PDEFormGetMatrix
PDEImageCreateInCosDoc
PDEImageCreateInCosDoc64
PDEImageGetDataLen64
PDEScratchDocCleanup
PDFFileSpecAcquireASPathEx
PDFFileSpecGetDIPathEx
PDFFileSpecNewFromASPathEx
PDFLibraryRegisterRNG

PDOCRegisterFindOutAutoStatePrefProc
PDOCRegisterFindOutLanguageProc
PDOCRegisterFindOutUserProc
PDOCRegisterFindOutZoomProc

PDPageHasOverprintExt
PDPageLabelGetPrefixASText
PDPageLabelNewASText
PDSElementExportUserProperties
PDSElementGetActualTextASText
PDSElementGetAltASText
PDSElementGetTitleASText
PDSElementSetActualTextASText
PDSElementSetAltASText
PDSElementSetTitleASText
PDSysFontVerifyEncoding
PDTextAnnotGetContentsASText
PDTextAnnotSetContentsASText
PDThreadGetInfoASText
PDThreadSetInfoASText
PDThumbGetImageData
PDThumbGetIndexedColorSpace
PDXlateToASText
PDXlateToHostASText
PSDataBufferReset

The following APIs have been deprecated:

AFRegisterFormUIFrameworkHandler
AFUnregisterFormUIFrameworkHandler

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Online Collaboration

- Support for Database and Web Discussions comment repositories has been deprecated.
- Acrobat 8 introduces Shared Reviews, a new way of conducting document reviews and approvals. You are encouraged to use this new approach to online collaboration. For more information on Shared Reviews, see the Acrobat Help.

For more information on online collaboration, see *Acrobat Online Collaboration: Setup and Administration*.

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Interapplication Communication

Acrobat 8 and greater support a single document interface (SDI). The methods `AcroApp.SetFrame` and `AcroApp.GetFrame` do not work in SDI mode. For more information, see the *Interapplication Communication API Reference*.

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pdfmark Operator

The pdfmark operator no longer supports JDF. For more information, see the *pdfmark Reference*.

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Samples

Several of the samples have been improved and updated:

- The DocSign sample has been updated to demonstrate how to add a custom appearance for a digital signature.
- A sample cryptographic service provider (CSP) is provided as a DLL. The sample CSP opens PFX files and uses their credentials.

SampleRegistrar is a separate sample application to manage the certificates bound to the sample CSP. This application interacts with the CSP to register or unregister a digital ID file (a PFX file), add or remove certificates, and list registered digital IDs.

For more information, see the *Guide to SDK Samples*.

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Documentation

The documentation set for the Acrobat SDK is installed along with the software and is located in the Documentation folder.

All the guides have been updated and revised with a new format, editorial improvements, and technical updates.

● **New Guide for PDF Extensions**

Acrobat 8.1 introduces the guide *Acrobat Implementation of the PDF Specification*. This guide describes PDF extensions supported in the Adobe Acrobat 8.1 family of products but which are not yet reflected in the PDF specification. This guide also contains implementation notes specific to Acrobat 8.1.

The PDF specification is currently represented by the following documents:

- *PDF Reference, sixth edition, version 1.7*
- *PDF Redaction: Addendum to the PDF Reference, sixth edition, version 1.7*
- *Errata for the PDF Reference, sixth edition, version 1.7*

This guide reflects Adobe's commitment to transferring responsibility of the PDF specification to the International Standards Organization (ISO).

● **Packaging of the PDF Specification**

Acrobat 8.1 packages the *PDF Reference, sixth edition, version 1.7* in a PDF package that also includes the following documents:

- *PDF Redaction: Addendum to the PDF Reference, sixth edition, version 1.7*
- *Errata for the PDF Reference, sixth edition, version 1.7*
- *Acrobat Implementation of the PDF Specification*

A PDF package is a single PDF file that enables a viewer application to describe and navigate between the files it contains. The name of this PDF package is pdf_reference.pdf.

● Renamed Guides

The following guides have new titles or PDF file names:

Former title and file name	New title and file name
<i>Developer FAQ</i> DeveloperFAQ.pdf	<i>Developer FAQ</i> Acrobat_SDK_developer_faq.pdf
<i>Acrobat SDK Documentation Roadmap</i> DocumentationRoadmap.pdf	<i>Acrobat SDK Documentation Roadmap</i> Acrobat_SDK_doc_map.pdf
<i>Samples Guide</i> SamplesGuide.pdf	<i>Guide to SDK Samples</i> samples_guide.pdf
<i>Snippet Runner Cookbook</i> SnippetRunnerCookbook.pdf	<i>Snippet Runner Cookbook</i> snippet_runner_cookbook.pdf
<i>Acrobat SDK User's Guide</i> UserGuide.pdf	<i>Overview</i> Acrobat_SDK_overview.pdf
<i>Interapplication Communication Overview</i> IACOverview.pdf	<i>Developing Applications Using Interapplication Communication</i> iac_developer_guide.pdf
<i>Interapplication Communication Reference</i> IACReference.pdf	<i>Interapplication Communication API Reference</i> iac_api_reference.pdf

Former title and file name**New title and file name**

*Acrobat Online Collaboration:
Setup and Administration*

OnlineCollaboration.pdf

*Acrobat Online Collaboration:
Setup and Administration*

online_collaboration.pdf

*Information for Developers Using the
SaveAsXML Plug-in*

SaveAsXML.pdf

Extending the Acrobat SaveAsXML Plug-in

save_as_xml.pdf

3D JavaScript Reference

Acro3DJS.pdf

*JavaScript for Acrobat 3D Annotations
API Reference*

js_3d_api_reference.pdf

Acrobat JavaScript Scripting Guide

AcroJSGuide.pdf

*Developing Acrobat Applications Using
JavaScript*

js_developer_guide.pdf

Acrobat JavaScript Scripting Reference

AcroJS.pdf

JavaScript for Acrobat API Reference

js_api_reference.pdf

Acrobat Distiller® Parameters

DistillerParameters.pdf

Adobe PDF Creation Settings

pdf_creation_settings.pdf

Acrobat Distiller API Reference

DistillerAPIReference.pdf

Acrobat Distiller API Reference

distiller_api_reference.pdf

pdfmark Reference Manual

pdfmarkReference.pdf

pdfmark Reference

pdfmark_reference.pdf

Former title and file name**New title and file name**

Acrobat SDK Plug-in Guide

PluginGuide.pdf

Developing Plug-ins and Applications

plugin_apps_developer_guide.pdf

PDF Reference

PDFReference.pdf

PDF Reference

pdf_reference.pdf

Acrobat Tracker

Tracker.pdf

Acrobat Tracker

tracker.pdf

Acrobat and PDF Library API Reference

APIReference.pdf

Acrobat and PDF Library API Reference

acrobat_pdfl_api_reference.pdf

Reading PDF through Accessibility Interfaces

Access.pdf

PDF Accessibility API Reference

access.pdf

PDF Open Parameters

PDFOpenParameters.pdf

Parameters for Opening PDF Files

pdf_open_parameters.pdf

● Discontinued Guides

These guides have been discontinued. In most cases, their content has been merged into other guides to streamline the documentation library:

Discontinued guide**Content merged into**

Programming JavaScript using Visual Basic

VBJavaScript.pdf

*Developing Applications Using
Interapplication Communication*

Discontinued guide**Content merged into**

Acrobat and PDF Library API Overview
APIOverview.pdf

Developing Plug-ins and Applications and
Acrobat and PDF Library API Reference

Adobe Reader-enabled Plug-ins
ReaderEnabling.pdf

Developing Plug-ins and Applications

Acrobat 3D Annotations Tutorial
3DAnnotations.pdf

Developing Plug-ins and Applications

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Events and Seminars

For the latest information on events, seminars, and training opportunities for the Acrobat SDK, see http://www.adobe.com/go/acrobat_developer.

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