JavaScript™ for Acrobat® API Reference

Adobe® Acrobat® SDK

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Adobe® Acrobat® SDK 8.1 JavaScript for Acrobat API Reference for Microsoft® Windows® and Mac OS®.

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Contents

2 JavaScript API (Continued)

2 JavaScript API (Continued)

2 JavaScript API (Continued)

2 JavaScript API (Continued)

2 JavaScript API (Continued)

2 JavaScript API (Continued)

2 JavaScript API (Continued)

2 JavaScript API (Continued)

2 JavaScript API (Continued)

2 JavaScript API (Continued)

2 JavaScript API (Continued)

2 JavaScript API (Continued)

2 JavaScript API (Continued)

2 JavaScript API (Continued)

2 JavaScript API (Continued)

2 JavaScript API (Continued)

2 JavaScript API (Continued)

2 JavaScript API (Continued)

2 JavaScript API (Continued)

2 JavaScript API (Continued)

2 JavaScript API (Continued)

2 JavaScript API (Continued)

2 JavaScript API (Continued)

2 JavaScript API (Continued)

3 New Features and Changes ... 736

Preface

This reference contains the documentation of the objects, properties and methods of the JavaScript™ extensions for Adobe® Acrobat® Professional, Acrobat Standard and Adobe Reader®.

What's in this guide?

This guide describes the JavaScript for Acrobat API:

- "JavaScript API" on page 35 describes the JavaScript API in detail. All objects, properties and methods are documented and extensive code examples are presented.
- "New Features and Changes" on page 736 summarizes the new features and changes introduced in recent versions of Acrobat.

Note: Certain properties and methods that may be discoverable through JavaScript's introspection facilities are not documented here. Undocumented properties and methods should not be used. They are entirely unsupported and subject to change without notice at any time.

Who should read this guide?

This document is intended for users familiar with core JavaScript 1.6. The intended audience includes, but is not limited to, authors of interactive PDF documents, form designers of intelligent documents, and Acrobat plug-in developers.

A knowledge of the Acrobat user interface is essential. Familiarity with the PDF file format is helpful.

The use of JavaScript to control additional Acrobat features such as ADBC, multimedia, SOAP, XML, and various security protocols requires knowledge of the corresponding technologies.

Related documentation

This document refers to the following sources for additional information about JavaScript and related technologies. The Acrobat documentation is available through the Acrobat Family Developer Center, http://www.adobe.com/go/acrobat_developer.

For information about	See
A guide to the documentation in the Acrobat SDK.	*Acrobat SDK Documentation Roadmap*
Known issues and implementation details.	*Readme*
Answers to frequently asked questions about the Acrobat SDK.	*Developer FAQ*
New features in this Acrobat SDK release.	*What's New*
A general overview of the Acrobat SDK.	*Overview*
A guide to the sections of the Acrobat SDK that pertain to Adobe Reader.	*Developing for Adobe Reader*

For information about	See
A guide to the sample code included with the Acrobat SDK.	*Guide to SDK Samples*
Using DDE, OLE, Apple events, and AppleScript to control Acrobat and Adobe Reader and to render PDF documents.	*Developing Applications Using Interapplication Communication*
Detailed descriptions of DDE, OLE, Apple event, and AppleScript APIs for controlling Acrobat and Adobe Reader or for rendering PDF documents.	*Interapplication Communication API Reference*
Detailed descriptions of JavaScript APIs for adding interactivity to 3D annotations within PDF documents.	*JavaScript for Acrobat 3D Annotations API Reference*
Using JavaScript to develop and enhance standard workflows in Acrobat and Adobe Reader.	*Developing Acrobat Applications Using JavaScript*
Using RSS to track remote resources in an occasionally-connected environment.	*Acrobat Tracker*
A detailed description of an extension to the PostScript® language which allows the description of PDF features not found in standard PostScript.	*pdfmark Reference*
A detailed description of the PDF file format.	*PDF Reference*
Using JavaScript to perform repetitive operations on a collection of files.	*Batch Sequences*
A detailed description of the parameters for opening PDF files and for performing actions on them using a URL or command.	*Parameters for Opening PDF Files*
Describes the XFA specification.	*XFA Specification*
Describes the specific language for describing patterns utilized for formatting or parsing data.	*XFA-Picture Clause 2.0 Specification*
This document is the XFDF specification.	*XML Form Data Format Specification*
This document describes the different models available in the XML Form Object Model for scripting. It provides detailed information about the different objects in each of those models, and their associated properties and methods.	*Adobe XML Form Object Model Reference*
This document describes methods of converting Acrobat forms to Adobe LiveCycle® Designer forms, and explains the differences between the Acrobat and LiveCycle Designer form object models.	*Converting Acrobat JavaScript for Use in LiveCycle Designer Forms*
This document describes the digital signature capabilities of Acrobat, which document authors can use to create certified documents, signable forms, and custom workflows and appearances.	*Acrobat 8.0 Security Feature User Reference*

1 Introduction

JavaScript is the cross-platform scripting language of the Adobe Acrobat family of products that includes Acrobat Professional, Acrobat Standard, and Adobe Reader. Through JavaScript extensions, the viewer application and its plug-ins expose much of their functionality to document authors, form designers, and plug-in developers.

This functionality includes the following features, among others:

- Processing forms within the document
- Batch processing collections of PDF documents
- Developing and maintaining online collaboration schemes
- Communicating with local databases
- Controlling multimedia events

In addition to being available in Acrobat and Adobe Reader, the objects, properties, and methods for the Acrobat extensions for JavaScript can also be accessed through Microsoft Visual Basic to automate the processing of PDF documents. See the *Interapplication Communication API Reference* for details.

Syntax

Some JavaScript objects are *static* objects that can be used as is and must be spelled as indicated. For example, the `app` object represents the JavaScript application. There is only one such object and it must be spelled `app` (case-sensitive).

Other objects are dynamic objects that can be assigned to a variable. For example, a Doc object may be obtained and assigned to a variable:

```
var myDoc = app.newDoc();
```

In this example, `myDoc` can access all methods and properties of the Doc object. For example:

```
myDoc.closeDoc();
```

Method arguments

Many of the JavaScript methods provided by Acrobat accept either a list of arguments, as is customary in JavaScript, or a single object argument with properties that contain the arguments. For example, these two calls are equivalent:

```
app.alert( "Acrobat Multimedia", 3);

app.alert({ cMsg: "Acrobat Multimedia", nIcon: 3});
```

Note: The JavaScript methods defined in support of multimedia do not accept these two argument formats interchangeably. Use the exact argument format described for each method.

Parameter help

When using Acrobat Professional, if you give an Acrobat method an argument of `acrohelp` and execute that method in the JavaScript Debugger console (or any internal JavaScript editor), the method returns a list of its own arguments.

For example, enter the following code in the console window.

```
app.response(acrohelp)
```

While the cursor is still on the line just entered, press either Ctrl + Enter or the Enter key on the numeric pad. The console displays the following message.

```
HelpError: Help.
app.response:1:Console undefined:Exec
====> [cQuestion: string]
====> [cTitle: string]
====> [cDefault: string]
====> [bPassword: boolean]
====> [cLabel: string]
```

Parameters listed in square brackets indicate optional parameters.

Note: Parameter help is not implemented for every JavaScript method. For example, it is not implemented for methods defined in the App JavaScript folder.

Paths

Several methods take *device-independent paths* as arguments. See the *PDF Reference*, version 1.7, for details about the device-independent path format.

Safe path

Acrobat 6.0 introduced the concept of a *safe path* for JavaScript methods that write data to the local hard drive based on a path passed to it by one of its parameters.

A path cannot point to a system critical folder, for example a root, windows or system directory. A path is also subject to other unspecified tests.

For many methods, the file name must have an extension appropriate to the type of data that is to be saved. Some methods may have a no-overwrite restriction. These additional restrictions are noted in the documentation.

Generally, when a path is judged to be not safe, a `NotAllowedError` exception is thrown (see `Error` object) and the method fails.

Privileged context

A context in which you have the right to do something that is normally restricted. Such a right (or privilege) could be granted by executing a method in a specific way (through the console or batch process), by some PDF property, or because the document was signed by someone you trust. For example, trusting a document certifier's certificate for executing JavaScript creates a privileged context which enables the JavaScript to run where it otherwise would not.

Privileged versus non-privileged context

Some JavaScript methods, marked in this book by S in the third column of the quick bar, have security restrictions. These methods can be executed only in a *privileged context*, which includes console, batch and application initialization events. All other events (for example, page open and mouse-up events) are considered *non-privileged*.

The description of each security-restricted method indicates the events during which the method can be executed.

Beginning with Acrobat 6.0, security-restricted methods can execute without restrictions if the document certifier's certificate is trusted for running embedded high privilege JavaScript.

In Acrobat versions earlier than 7.0, menu events were considered privileged contexts. Beginning with Acrobat 7.0, execution of JavaScript through a menu event is no longer privileged. You can execute security-restricted methods through menu events in one of the following ways:

- By opening the JavaScript category of the Acrobat preferences and checking the item named "Enable Menu Items JavaScript Execution Privileges".
- By executing a specific method through a *trusted function* (introduced in Acrobat 7.0). Trusted functions allow privileged code—code that normally requires a privileged context to execute—to execute in a non-privileged context. For details and examples, see `app.trustedFunction`.

User preferences

There are many references in this document to the Acrobat user preferences. The preferences dialog box is accessed through the following menu commands, depending on platform:

Microsoft® Windows®: Edit > Preferences

Mac OS: Acrobat > Preferences

The preferences dialog box contains several categories that have relevant commands, including Forms, General, and JavaScript.

The following methods, if run from a document-level script, no longer affect the user preferences:

- `app.fs.defaultTransition, app.fsTransition`
- `app.fs.useTimer, app.fsUseTimer`
- `app.fs.usePageTiming, app.fsUsePageTiming`
- `app.fs.loop, app.fsLoop`
- `app.fs.escapeExits, app.fsEscape`
- `app.fsClick, app.fs.clickAdvances`
- `app.fsTimeDelay, app.fs.timeDelay`
- `app.fsColor, app.fs.backgroundColor`
- `app.fsCursor, app.fs.cursor`
- `app.openInPlace`

These methods still affect user preferences if run from an application-level script.

Also note that `app.fs.escapeExits` and `app.fsEscape` can now only be set to `false` when running in a privileged context.

Quick bars

At the beginning of most property and method descriptions, a small table or *quick bar* provides a summary of the item's availability and usage recommendations.

The quick bar shown here has descriptive column headings that are not shown in the reference.

Version or Deprecated	Save and Preferences	Security	Availability
6.0	D	S	C

The following tables show the symbols that can appear in each column and their meanings.

Column 1: Version or deprecated

#.#	A number indicates the version of the software in which a property or method became available. If the number is specified, the property or method is available only in versions of the Acrobat software greater than or equal to that number.
	For Acrobat 8.0, there are some compatibility issues with older versions. Before accessing the property or method, the script should check that the forms version is greater than or equal to that number to ensure backward compatibility. For example:
	`if (typeof app.formsVersion != "undefined" && app.formsVersion >= 8.0)`
	`{`
	`  // Perform version specific operations.`
	`}`
	If the first column is blank, no compatibility checking is necessary.

X	The property or method is deprecated.

Column 2: Save and Preferences

D	Writing to this property or method dirties (modifies) the PDF document. If the document is subsequently saved, the effects of this method are saved as well. (In Adobe Reader, the document requires specific rights to be saved.)
P	Even though this property does not change the document, it can permanently change a user's application preferences.

Column 3: Security

S	For security reasons, this property or method may be available only during certain events. These events include batch processing, application start, or execution within the console. (See the `event` object for details of the Acrobat events.) Beginning with Acrobat 7.0, to execute a security-restricted method through a menu event, one of the following must be true: • The JavaScript user preferences item Enable Menu Items JavaScript Execution Privileges is checked. • The method is executed through a trusted function. For details and examples, see the `app.trustedFunction` method. See "Privileged versus non-privileged context" on page 32 for more information. **Note:** (Acrobat 6.0 or later) Methods marked with S will execute without restriction in a certified document provided the certifier's certificate is trusted for running embedded high privilege JavaScript and other limitations in the quick bar fields are met.

Column 4: Availability

	If the column is blank, the property or method is allowed in Adobe Reader, Acrobat Professional or Acrobat Standard.
X	The property or method is not allowed in Adobe Reader but is available in Acrobat Professional and Acrobat Standard.
F C S D G	The property or method is allowed in Acrobat Professional and Acrobat Standard. It can be accessed in Adobe Reader (version 5.1 or later) depending on additional usage rights that have been applied to the document: • F — Requires forms rights • C — Requires the right to manipulate comments • S — Requires the document save right • D — Requires file attachment rights • G — Requires digital signature rights
P	The property or method is available only in Acrobat Professional

Domain names in code samples

Throughout this document there are numerous code samples that use URLs. Such examples use the domain names example.com, example.net, and example.org, which are reserved for the purpose of illustration. Some examples use IP addresses, these addresses come from the range 172.16.0.0 through 172.31.255.255, which are reserved for private networks.

2 JavaScript API

This chapter is a complete reference to the Acrobat extensions to JavaScript, its objects, methods, and properties. The chapter is organized alphabetically by object name.

The Acrobat extensions to core JavaScript date back to Adobe Exchange 3.01. JavaScript functionality was added to this version by means of the "Acrobat Forms Author Plug-in 3.5 Update". Initially, JavaScript version 1.2 was used, as the table below shows. In Acrobat 5.0, there was a major effort to extend core JavaScript, then version 1.5, to include much of the functionality of the application and its plug-ins. The most recent version of Acrobat now uses JavaScript 1.6.

Acrobat version	3.01	4.0	5.0	6.0	7.0	8.0
JavaScript version	1.2	1.2	1.5	1.5	1.5	1.6

When developing a JavaScript solution, you must have a minimal Acrobat (or Adobe Reader) version in mind. The choice of target application determines, by the table above, the version of JavaScript you should use.

Most JavaScript API function are documented in all versions of Acrobat and Adobe Reader, while others are only defined in later versions. Still, some APIs are restricted to Acrobat Professional and some cannot be used by Adobe Reader, while others can be used in Adobe Reader only when the document has the appropriate Reader Extension Rights. Again, for a JavaScript solution, all these factors must be considered.

See "Quick bars" on page 33 for a description of the symbols that appear at the beginning of property and method descriptions. The quick bar reflects the version number where the method was first defined, security restrictions, limitations on Adobe Reader, and needed Adobe Reader usage rights.

For documentation on core JavaScript, the reader is directed to the Mozilla Developer Center, http://developer.mozilla.org/en/docs/JavaScript.

ADBC

5.0			✗

The ADBC plug-in allows JavaScript in PDF documents to access databases through a consistent object model. ADBC is a Windows-only feature and requires ODBC to be installed on the client machine.

The object model is based on general principles used in the object models for the ODBC and JDBC APIs. Like ODBC and JDBC, ADBC is a means of communicating with a database through SQL.

Note: ADBC provides no security for any of the databases it is programmed to access. It is the responsibility of the database administrator to keep all data secure.

The `ADBC` object is a global object whose methods allow a script to create database connection contexts or connections. Related objects used in database access are described separately.

Related object	Brief description	Page
`Connection`	An object through which a list of tables in the connected database can be obtained.	page 208
`Statement`	An object through which SQL statements can be executed and rows retrieved based on the query.	page 697

ADBC properties

SQL types

5.0			✗

The `ADBC` object has the following constant properties representing various SQL types:

Constant property name	Value	Version
`SQLT_BIGINT`	0	
`SQLT_BINARY`	1	
`SQLT_BIT`	2	
`SQLT_CHAR`	3	
`SQLT_DATE`	4	
`SQLT_DECIMAL`	5	
`SQLT_DOUBLE`	6	
`SQLT_FLOAT`	7	
`SQLT_INTEGER`	8	

Constant property name	Value	Version
SQLT_LONGVARBINARY	9	
SQLT_LONGVARCHAR	10	
SQLT_NUMERIC	11	
SQLT_REAL	12	
SQLT_SMALLINT	13	
SQLT_TIME	14	
SQLT_TIMESTAMP	15	
SQLT_TINYINT	16	
SQLT_VARBINARY	17	
SQLT_VARCHAR	18	
SQLT_NCHAR	19	6.0
SQLT_NVARCHAR	20	6.0
SQLT_NTEXT	21	6.0

The `type` properties of the `Column` object and `ColumnInfo` object use these properties.

JavaScript types

5.0			✖

The `ADBC` object has the following constant properties representing various JavaScript data types.

Constant property name	Value
Numeric	0
String	1
Binary	2
Boolean	3
Time	4
Date	5
TimeStamp	6

The `Statement` object methods `getColumn` and `getColumnArray` use these types.

ADBC methods

getDataSourceList

5.0			X

Obtains information about the databases accessible from a given system.

Returns

An array containing a `DataSourceInfo` object for each accessible database on the system. The method never fails but may return a zero-length array.

Example

See `ADBC.newConnection`.

newConnection

5.0		S	X

Creates a `Connection` object associated with the specified database. Optionally, you can supply a user ID and a password.

Note: (Acrobat 6.0 and later) It is possible to connect to a database using a connection string with no Data Source Name (DSN), but this is only permitted, beginning with Acrobat 6.0, during a console or batch event. See also "Privileged versus non-privileged context" on page 32.

Parameters

`cDSN`	The data source name (DSN) of the database
`cUID`	(optional) User ID
`cPWD`	(optional) Password

Returns

A `Connection` object, or `null` on failure.

Example

Get the array of DataSourceInfo objects available on the system, and display them to the console, while searching for the data source named `q32000data`.

```
/* First, get the array of DataSourceInfo objects available on the system */
var aList = ADBC.getDataSourceList();
console.show(); console.clear();
```

```
try {
   /* Now display them, while searching for the one named
      "q32000data". */
   var DB = "", msg = "";
   if (aList != null) {
      for (var i=0; i < aList.length; i++) {
         console.println("Name: "+aList[i].name);
         console.println("Description: "+aList[i].description);
         // and choose one of interest
         if (aList[i].name=="q32000data")
            DB = aList[i].name;
      }
   }

   // Did we find the database?
   if (DB != "") {
      // Yes, establish a connection.
      console.println("The requested database has been found!");
      var Connection = ADBC.newConnection(DB);
      if (Connection == null) throw "Not Connected!";
      } else
         // No, display message to console.
         throw "Could not find the requested database.";
} catch (e) {
   console.println(e);
}

// Alternatively, we could simple connect directly.
var Connection = ADBC.newConnection("q32000data");
```

Alerter

7.0			

The Acrobat multimedia plug-in displays error alerts under various conditions such as a missing media file. JavaScript code can customize these alerts, either for an entire document or for an individual media player.

In an alert situation, the internal function `app.media.alert` is called with parameters containing information about the alert. The `app.media.alert` method handles the alert by looking for alerter objects and calling their `dispatch` methods, in this order:

```
args.alerter
doc.media.alerter
doc.media.stockAlerter
```

To handle alerts for a specific player, provide an alerter object in `args.alerter` when you call `app.media.createPlayer` or `app.media.openPlayer`.

To handle alerts for an entire document, set `doc.media.alerter` to an alerter object.

All alerts can be suppressed for a player or document by setting `args.alerter` or `doc.media.alerter` to `null`.

`doc.media.stockAlerter` provides the default alerts that are used if a custom alerter is not specified. This property is initialized automatically by `app.media.alert`. Normally, `doc.media.stockAlerter` would not be referenced in developer code.

Alerter methods

dispatch

7.0			

Called by `app.media.alert` to handle alert situations.

Parameters

`alert`	An Alert object (see below).

Returns

A Boolean value, `true` to stop further alert processing, `false` to continue processing.

Alert object

Properties	Type	Description
`type`	String	All alert types
`doc`	Doc object	All alert types
`fromUser`	Boolean	All alert types
`error`	Object	Available for the Exception type alert. The error object has a `message` property: `error: { message: String }`
`errorText`	String	Available for the PlayerError type alert.
`fileName`	String	Available for the FileNotFound type alert.
`selection`	`MediaSelection` object	Available for the SelectFailed type alert.

Example 1

Open a media player and suppress all alerts for this player.

```
app.media.openPlayer({ alerter: null });

// A more elaborate way to do the same thing
app.media.openPlayer(
{
   alerter:
   {
      dispatch() { return true; }
   }
});
```

Example 2

For all players in this document, log any alerts to a text field and allow the normal alert box to be displayed.

```
function logAlerts( doc )
{
   count = 0;
   doc.alerter =
   {
      dispatch( alert )
      {
         doc.getField("AlertLog").value += "Alert #"
            + ++count + ": " + alert.type + "\n";
      }
   }
}
logAlerts( this );
```

```
// Another way to keep the counter
function logAlerts( doc )
{
   doc.alerter =
   {
      count = 0,
      dispatch( alert )
      {
         doc.getField("AlertLog").value += "Alert #"
            + ++this.count + ": " + alert.type + "\n";
      }
   }
}
logAlerts( this );
```

Example 3

Handle the PlayerError alert here, with defaults for other alerts.

```
this.media.alerter =
{
   dispatch( alert )
   {
      switch( alert.type )
      {
         case "PlayerError":
         app.alert( "Player error: " + alert.errorText );
         return true;
      }
   }
}
```

AlternatePresentation

This object provides an interface to the document's particular alternate presentation. Use the Doc object method `alternatePresentations` to acquire an AlternatePresentation object.

See the *PDF Reference* version 1.7 for additional details on alternate presentations.

AlternatePresentation properties

active

6.0			

This property is `true` if the presentation is currently active and `false` otherwise. When a presentation is active, it controls how the document that owns it is displayed.

Type

Boolean

Access

R

Example

See the `start` method for an example.

type

6.0			

The type of the alternate presentation. Currently, the only supported type is “SlideShow”.

Type

String

Access

R

AlternatePresentation methods

start

6.0			

Switches the document view into the alternate presentation mode and sets the `active` property to `true`. An exception is thrown if this or any other alternate presentation is already active.

Parameters

`cOnStop`	(optional) An expression to be evaluated by Acrobat when the presentation completes for any reason (as a result of a call to `stop`, an explicit user action, or the presentation logic itself).
`cCommand`	(optional) A command or script to pass to the alternate presentation. **Note:** This command is presentation-specific (not a JavaScript expression).

Example

Assume there is a named presentation called "MySlideShow" within the document.

```
// oMySlideShow is an AlternatePresentation object
oMySlideShow = this.alternatePresentations.MySlideShow;
if (!oMySlideShow.active) oMySlideShow.start();
```

Note that `this.alternatePresentations` is used to access the specified presentation by property name.

stop

6.0			

Stops the presentation and switches the document into normal (PDF) presentation. An exception is thrown if this presentation is not active.

Example

In this example, `oMySlideShow` is an AlternatePresentations object. See `start` for a related example.

```
// Stop the show if already active
if (oMySlideShow.active) oMySlideShow.stop();
```

Annotation

This object represents an Acrobat annotation. Annotations can be created using the Acrobat annotation tool or by using the Doc object method `addAnnot`.

Before an annotation can be accessed, it must be bound to a JavaScript variable through a Doc object method such as `getAnnot`:

```
var a = this.getAnnot(0, "Important");
```

The script can then manipulate the annotation named "Important" on page 1 (0-based page numbering system) by means of the variable `a`. For example, the following code first stores the type of annotation in the variable `thetype`, then changes the author to "John Q. Public".

```
var thetype = a.type;         // read property
a.author = "John Q. Public"; // write property
```

Another way of accessing the Annotation object is through the Doc object `getAnnots` method.

Note: In Adobe Reader 5.1 or later, you can get the value of any annotation property except `contents`. The ability to set these properties depends on Comments document rights, as indicated by the C icon.

The user interface in Acrobat refers to annotations as *comments*.

Annotation types

Annotations are of different types, as reflected in the `type` property. Each type is listed in the table below, along with all documented properties returned by the `getProps` method.

Annotation type	Properties
`Caret`	author, borderEffectIntensity, borderEffectStyle, caretSymbol, contents, creationDate, delay, hidden, inReplyTo, intent, lock, modDate, name, noView, opacity, page, popupOpen, popupRect, print, readOnly, rect, refType, richContents, rotate, seqNum, strokeColor, style, subject, toggleNoView, type, width
`Circle`	author, borderEffectIntensity, borderEffectStyle, contents, creationDate, dash, delay, fillColor, hidden, inReplyTo, intent, lock, modDate, name, noView, opacity, page, popupOpen, popupRect, print, readOnly, rect, refType, richContents, rotate, seqNum, strokeColor, style, subject, toggleNoView, type, width
`FileAttachment`	attachIcon, author, borderEffectIntensity, borderEffectStyle, contents, creationDate, delay, hidden, inReplyTo, intent, lock, modDate, name, noView, opacity, page, point, print, readOnly, rect, refType, richContents, rotate, seqNum, strokeColor, style, subject, toggleNoView, type, width

Annotation type	Properties
FreeText	alignment, author, borderEffectIntensity, borderEffectStyle, callout, contents, creationDate, dash, delay, fillColor, hidden, inReplyTo, intent, lineEnding, lock, modDate, name, noView, opacity, page, print, readOnly, rect, refType, richContents, richDefaults, rotate, seqNum, strokeColor, style, subject, textFont, textSize, toggleNoView, type, width
Highlight	author, borderEffectIntensity, borderEffectStyle, contents, creationDate, delay, hidden, inReplyTo, intent, lock, modDate, name, noView, opacity, page, popupOpen, popupRect, print, quads, readOnly, rect, refType, richContents, rotate, seqNum, strokeColor, style, subject, toggleNoView, type, width
Ink	author, borderEffectIntensity, borderEffectStyle, contents, creationDate, dash, delay, gestures, hidden, inReplyTo, intent, lock, modDate, name, noView, opacity, page, popupOpen, popupRect, print, readOnly, rect, refType, richContents, rotate, seqNum, strokeColor, style, subject, toggleNoView, type, width
Line	arrowBegin, arrowEnd, author, borderEffectIntensity, borderEffectStyle, contents, creationDate, dash, delay, doCaption, fillColor, hidden, inReplyTo, intent, leaderExtend, leaderLength, lock, modDate, name, noView, opacity, page, points, popupOpen, popupRect, print, readOnly, rect, refType, richContents, rotate, seqNum, strokeColor, style, subject, toggleNoView, type, width
Polygon	author, borderEffectIntensity, borderEffectStyle, contents, creationDate, dash, delay, fillColor, hidden, inReplyTo, intent, lock, modDate, name, noView, opacity, page, popupOpen, popupRect, print, readOnly, rect, refType, richContents, rotate, seqNum, strokeColor, style, subject, toggleNoView, type, vertices, width
PolyLine	arrowBegin, arrowEnd, author, borderEffectIntensity, borderEffectStyle, contents, creationDate, dash, delay, fillColor, hidden, inReplyTo, intent, lock, modDate, name, noView, opacity, page, popupOpen, popupRect, print, readOnly, rect, refType, richContents, rotate, seqNum, strokeColor, style, subject, toggleNoView, type, vertices, width
Sound	author, borderEffectIntensity, borderEffectStyle, contents, creationDate, delay, hidden, inReplyTo, intent, lock, modDate, name, noView, opacity, page, point, print, readOnly, rect, refType, richContents, rotate, seqNum, soundIcon, strokeColor, style, subject, toggleNoView, type, width
Square	author, borderEffectIntensity, borderEffectStyle, contents, creationDate, dash, delay, fillColor, hidden, inReplyTo, intent, lock, modDate, name, noView, opacity, page, popupOpen, popupRect, print, readOnly, rect, refType, richContents, rotate, seqNum, strokeColor, style, subject, toggleNoView, type, width

Annotation type	Properties
Squiggly	author, borderEffectIntensity, borderEffectStyle, contents, creationDate, delay, hidden, inReplyTo, intent, lock, modDate, name, noView, opacity, page, popupOpen, popupRect, print, quads, readOnly, rect, refType, richContents, rotate, seqNum, strokeColor, style, subject, toggleNoView, type, width
Stamp	AP, author, borderEffectIntensity, borderEffectStyle, contents, creationDate, delay, hidden, inReplyTo, intent, lock, modDate, name, noView, opacity, page, popupOpen, popupRect, print, readOnly, rect, refType, rotate, seqNum, strokeColor, style, subject, toggleNoView, type
StrikeOut	author, borderEffectIntensity, borderEffectStyle, contents, creationDate, delay, hidden, inReplyTo, intent, lock, modDate, name, noView, opacity, page, popupOpen, popupRect, print, quads, readOnly, rect, refType, richContents, rotate, seqNum, strokeColor, style, subject, toggleNoView, type, width
Text	author, borderEffectIntensity, borderEffectStyle, contents, creationDate, delay, hidden, inReplyTo, intent, lock, modDate, name, noView, noteIcon, opacity, page, point, popupOpen, popupRect, print, readOnly, rect, refType, richContents, rotate, seqNum, state, stateModel, strokeColor, style, subject, toggleNoView, type, width
Underline	author, borderEffectIntensity, borderEffectStyle, contents, creationDate, delay, hidden, inReplyTo, intent, lock, modDate, name, noView, opacity, page, popupOpen, popupRect, print, quads, readOnly, rect, refType, richContents, rotate, seqNum, strokeColor, style, subject, toggleNoView, type, width

Annotation properties

The *PDF Reference* version 1.7 documents all Annotation properties and specifies how they are stored.

Some property values are stored in the PDF document as names and others are stored as strings (see the *PDF Reference* version 1.7 for details). A property stored as a name can have only 127 characters.

Examples of properties that have a 127-character limit include `AP`, `beginArrow`, `endArrow`, `attachIcon`, `noteIcon`, and `soundIcon`.

alignment

5.0	D		C

Controls the alignment of the text for a `FreeText` annotation.

Alignment	Value
Left aligned	0
Centered	1
Right aligned	2

Type

Number

Access

R/W

Annotations

FreeText

AP

5.0	D		C

The named appearance of the stamp to be used in displaying a stamp annotation. The names of the standard stamp annotations are given below:

```
Approved
AsIs
Confidential
Departmental
Draft
Experimental
Expired
Final
ForComment
ForPublicRelease
NotApproved
NotForPublicRelease
Sold
TopSecret
```

Type

String

Access

R/W

Annotations

Stamp

Example

Programmatically add a stamp annotation.

```
var annot = this.addAnnot({
   page: 0,
   type: "Stamp",
   author: "A. C. Robat",
   name: "myStamp",
   rect: [400, 400, 550, 500],
   contents: "Try it again, this time with order and method!",
   AP: "NotApproved" });
```

Note: The name of a particular stamp can be found by opening the PDF file in the `Stamps` folder that contains the stamp in question. For a list of stamp names currently in use in the document, see the Doc object `icons` property.

arrowBegin

5.0	Ⓓ		Ⓒ

Determines the line cap style that specifies the shape to be used at the beginning of a line annotation. Permissible values are:

```
None (default)
OpenArrow
ClosedArrow
ROpenArrow     // Acrobat 6.0
RClosedArrow   // Acrobat 6.0
Butt           // Acrobat 6.0
Diamond
Circle
Square
Slash          // Acrobat 7.0
```

Type

String

Access

R/W

Annotations

Line, PolyLine

Example

See the `setProps` method.

arrowEnd

5.0	D		C

Determines the line cap style that specifies the shape to be used at the end of a line annotation. The following list shows the allowed values:

```
None (default)
OpenArrow
ClosedArrow
ROpenArrow     // Acrobat 6.0
RClosedArrow   // Acrobat 6.0
Butt           // Acrobat 6.0
Diamond
Circle
Square
Slash          // Acrobat 7.0
```

Type

String

Access

R/W

Annotations

Line, PolyLine

Example

See the `setProps` method.

attachIcon

5.0	D		C

The name of an icon to be used in displaying the annotation. Recognized values are listed below:

```
Paperclip
PushPin (default)
Graph
Tag
```

Type

String

Access

R/W

Annotations

FileAttachment

author

5.0	D		C

Gets or sets the author of the annotation.

Type

String

Access

R/W

Annotations

All

Example

See the `contents` property.

borderEffectIntensity

6.0	D		C

The intensity of the border effect, if any. This represents how cloudy a cloudy rectangle, polygon, or oval is.

Type

Number

Access

R/W

Annotations

All

borderEffectStyle

6.0	D		C

If non-empty, the name of a border effect style. Currently, the only supported border effects are the empty string (nothing) or "C" for cloudy.

Type

String

Access

R/W

Annotations

All

callout

7.0	D		C

An array of four or six numbers specifying a callout line attached to the free text annotation. See the *PDF Reference* version 1.7 for additional details.

Type

Array

Access

R/W

Annotations

FreeText

caretSymbol

6.0	D		C

The symbol associated with a Caret annotation, which is a visual symbol that indicates the presence of text edits. Valid values are "" (nothing), "P" (paragraph symbol) or "S" (space symbol).

Type

String

Access

R/W

Annotations

Caret

contents

5.0	D		C

Accesses the contents of any annotation that has a pop-up window. For sound and file attachment annotations, specifies the text to be displayed as a description.

Type

String

Access

R/W

Annotations

All

Example

Create a text annotation, with author and contents specified.

```
var annot = this.addAnnot({
   page: 0,
   type: "Text",
   point: [400,500],
   author: "A. C. Robat",
   contents: "Call Smith to get help on this paragraph.",
   noteIcon: "Help"
});
```

See also the Doc object addAnnot method.

creationDate

6.0			C

The date and time when the annotation was created.

Type

Date

Access

R

Annotations

All

dash

5.0	D		C

A dash array defining a pattern of dashes and gaps to be used in drawing a dashed border. For example, a value of [3, 2] specifies a border drawn with 3-point dashes alternating with 2-point gaps.

To set the dash array, the `style` property must be set to `D`.

Type

Array

Access

R/W

Annotations

FreeText, Line, PolyLine, Polygon, Circle, Square, Ink

Example

Assuming `annot` is an `Annotation` object, this example changes the border to dashed.

```
annot.setProps({ style: "D", dash: [3,2] });
```

See also the example following the `delay` property.

delay

5.0			C

If `true`, property changes to the annotation are queued and then executed when `delay` is set back to `false`. (Similar to the Field object `delay` property.)

Type

Boolean

Access

R/W

Annotations

All

Example

Assuming `annot` is an `Annotation` object, the code below changes the border to dashed.

```
annot.delay=true;
annot.style = "D";
annot.dash = [4,3];
annot.delay = false;
```

doc

5.0			C

The Doc object of the document in which the annotation resides.

Type

Doc object

Access

R

Annotations

All

Example

Construct an annotation, and illustrate the use of the `doc` property.

```
var inch = 72;
var annot = this.addAnnot({
   page: 0,
   type: "Square",
   rect: [1*inch, 3*inch, 2*inch, 3.5*inch]
});
/* displays, for example, "file:///C|/Adobe/Annots/myDoc.pdf" */
console.println(annot.doc.URL);
```

doCaption

7.0	D		C

If `true`, draws the rich contents in the line appearance itself.

Type

Boolean

Access

R/W

Annotations

Line

Example

See the example following the `points` property, page 65.

fillColor

5.0	D		C

Sets the background color for circle, square, line, polygon, polyline, and free text annotations. Values are defined by using `transparent`, `gray`, `RGB` or `CMYK` color. See "Color arrays" on page 193 for information on defining color arrays and how values are used with this property.

Type

Color

Access

R/W

Annotations

Circle, Square, Line, Polygon, PolyLine, FreeText

Example

Create a Circle annotation and set the background color.

```
var annot = this.addAnnot(
{
   type: "Circle",
   page: 0,
   rect: [200,200,400,300],
   author: "A. C. Robat",
   name: "myCircle",
   popupOpen: true,
   popupRect: [200,100,400,200],
   contents: "Hi World!",
   strokeColor: color.red,
   fillColor: ["RGB",1,1,.855]
});
```

gestures

5.0	D		C

An array of arrays, each representing a stroked path. Each array is a series of alternating *x* and *y* coordinates in default user space, specifying points along the path. When drawn, the points are connected by straight lines or curves in an implementation-dependent way. See the *PDF Reference* version 1.7 for more details.

Type

Array

Access

R/W

Annotations

Ink

hidden

5.0	D		C

If `true`, the annotation is not shown and there is no user interaction, display, or printing of the annotation.

Type

Boolean

Access

R/W

Annotations

All

inReplyTo

6.0	D		C

If non-empty, specifies the `name` value of the annotation that this annotation is in reply to.

Type

String

Access

R/W

Annotations

All

intent

7.0	D		C

This property allows a markup annotation type to behave differently, depending on the intended use of the annotation. For example, the Callout Tool is a free text annotation with `intent` set to `FreeTextCallout`.

Though this property is defined for all annotations, currently, only free text, polygon, and line annotations have non-empty values for `intent`.

Type

String

Access

R/W

Annotations

All

The table below lists the tools available through the UI for creating annotations with special appearances.

UI	Annotation type	Intent
Callout Tool	`FreeText`	`FreeTextCallout`
Cloud Tool	`Polygon`	`PolygonCloud`
Arrow Tool	`Line`	`LineArrow`
Dimensioning Tool	`Line`	`LineDimension`

leaderExtend

7.0	D		C

Specifies the length of *leader line extensions* that extend from both endpoints of the line, perpendicular to the line. These lines extend from the line proper 180 degrees from the leader lines. The value should always be greater than or equal to zero.

The default is zero (no leader line extension).

Type

Number

Access

R/W

Annotations

Line

leaderLength

7.0	D		C

Specifies the length of *leader lines* that extend from both endpoints of the line, perpendicular to the line. The value may be negative to specify an alternate orientation of the leader lines.

The default is 0 (no leader line).

Type

Number

Access

R/W

Annotations

Line

lineEnding

7.0	D		C

This property determines how the end of a callout line is stroked. It is relevant only for a free text annotation when the value of `intent` is `FreeTextCallout`. Recognized values are listed below:

```
None (default)
OpenArrow
ClosedArrow
ROpenArrow     // Acrobat 6.0
RClosedArrow   // Acrobat 6.0
Butt           // Acrobat 6.0
Diamond
Circle
Square
Slash          // Acrobat 7.0
```

Type

String

Access

R/W

Annotations

FreeText

lock

5.0	D		C

If `true`, the annotation is locked, which is equivalent to `readOnly` except that the annotation is accessible through the properties dialog box in the UI.

Type

Boolean

Access

R/W

Annotations

All

modDate

5.0			C

The last modification date for the annotation.

Type

Date

Access

R/W

Annotations

All

Example

Print the modification date to the console.

```
console.println(util.printd("mmmm dd, yyyy", annot.modDate));
```

name

5.0	D		C

The name of an annotation. This value can be used by the Doc object `getAnnot` method to find and access the properties and methods of the annotation.

Type

String

Access

R/W

Annotations

All

Example

Locate the annotation named `myNote` and appends a comment.

```
var gannot = this.getAnnot(0, "myNote");
gannot.contents += "\r\rDon't forget to check with Smith";
```

notelcon

5.0	D		C

The name of an icon to be used in displaying the annotation. Recognized values are given below:

```
Check
Circle
Comment
Cross
Help
Insert
Key
NewParagraph
Note(default)
Paragraph
RightArrow
RightPointer
Star
UpArrow
UpLeftArrow
```

Type

String

Access

R/W

Annotations

Text

Example

See the contents property.

noView

5.0	D		C

If `true`, the annotation is hidden, but if the annotation has an appearance, that appearance should be used for printing only.

Type

Boolean

Access

R/W

Annotations

All

Example

See the `toggleNoView` property.

opacity

5.0	D		C

The constant opacity value to be used in painting the annotation. This value applies to all visible elements of the annotation in its closed state (including its background and border), but not to the pop-up window that appears when the annotation is opened. Permissible values are 0.0 - 1.0. A value of 0.5 makes the annotation semitransparent.

Type

Number

Access

R/W

Annotations

All

page

5.0	D		C

The page on which the annotation resides.

Type

Integer

Access

R/W

Annotations

All

Example

The following code moves the `Annotation` object `annot` from its current page to page 3 (0-based page numbering system).

```
annot.page = 2;
```

point

5.0	D		C

An array of two numbers, $[x_{ul}, y_{ul}]$ that specifies the upper left-hand corner in default user space of the icon for a text, sound or file attachment annotation.

Type

Array

Access

R/W

Annotations

Text, Sound, FileAttachment

Example

Place a help note icon at specified coordinates. The icon is located at the upper right corner of the popup note.

```
var annot = this.addAnnot({
   page: 0,
   type: "Text",
   point: [400,500],
   contents: "Call Smith to get help on this paragraph.",
   popupRect: [400,400,550,500],
   popupOpen: true,
   noteIcon: "Help"
});
```

See also the noteIcon property and the Doc object addAnnot method.

points

5.0	D		C

An array of two points, $[[x_1, y_1], [x_2, y_2]]$, specifying the starting and ending coordinates of the line in default user space.

Type

Array

Access

R/W

Annotations

Line

Example

Draw a line between two specified points.

```
var annot = this.addAnnot({
   type: "Line",
   page: 0,
   author: "A. C. Robat",
   doCaption: true,
   contents: "Look at this again!",
   points: [[10,40],[200,200]],
});
```

See the arrowBegin and arrowEnd properties, the setProps method, and the Doc object addAnnot method.

popupOpen

5.0	D		C

If `true`, the pop-up text note appears open when the page is displayed.

Type

Boolean

Access

R/W

Annotations

All except FreeText, Sound, FileAttachment

Example

See the `print` property.

popupRect

5.0	D		C

An array of four numbers [x_{ll}, y_{ll}, x_{ur}, y_{ur}] specifying the lower-left *x*, lower-left *y*, upper-right *x*, and upper-right *y* coordinates—in default user space—of the rectangle of the pop-up annotation associated with a parent annotation. It defines the location of the pop-up annotation on the page.

Type

Array

Access

R/W

Annotations

All except FreeText, Sound, FileAttachment

Example

See the `print` property.

print

5.0	D		C

Indicates whether the annotation should be printed (`true`) or not (`false`).

Type

Boolean

Access

R/W

Annotations

All

quads

5.0	D		C

An array of 8 x *n* numbers specifying the coordinates of *n* quadrilaterals in default user space. Each quadrilateral encompasses a word or group of contiguous words in the text underlying the annotation. See the *PDF Reference* version 1.7 for more details. The `quads` for a word can be obtained through calls to the Doc object `getPageNthWordQuads` method.

Type

Array

Access

R/W

Annotations

Highlight, StrikeOut, Underline, Squiggly

Example

See the Doc object `getPageNthWordQuads` method.

rect

5.0	D		C

The `rect` array consists of four numbers [x_{ll}, y_{ll}, x_{ur}, y_{ur}] specifying the lower-left *x*, lower-left *y*, upper-right *x*, and upper-right *y* coordinates—in default user space—of the rectangle defining the location of the annotation on the page. See also the `popupRect` property.

Type

Array

Access

R/W

Annotations

All

readOnly

5.0	D		C

If `true`, the annotation should display but not interact with the user.

Type

Boolean

Access

R/W

Annotations

All

refType

7.0	D		C

The reference type of the annotation. The property distinguishes whether `inReplyTo` indicates a plain threaded discussion relationship or a group relationship. Recognized values are “R” and “Group”. See the *PDF Reference* version 1.7 for additional details.

Type

String

Access

R/W

Annotations

All

richContents

6.0	D		C

This property gets the text contents and formatting of an annotation. The rich text contents are represented as an array of `Span` objects containing the text contents and formatting of the annotation.

Type

Array of `Span` objects

Access

R/W

Annotations

All except Sound, FileAttachment

Example

Create a text annotation and give it some rich text contents.

```
var annot = this.addAnnot({
   page: 0,
   type: "Text",
   point: [72,500],
   popupRect: [72, 500,6*72,500-2*72],
   popupOpen: true,
   noteIcon: "Help"
});

var spans = new Array();
spans[0] = new Object();
spans[0].text = "Attention:\r";
spans[0].textColor = color.blue;
spans[0].textSize = 18;
```

```
spans[1] = new Object();
spans[1].text = "Adobe Acrobat 6.0\r";
spans[1].textColor = color.red;
spans[1].textSize = 20;
spans[1].alignment = "center";

spans[2] = new Object();
spans[2].text = "will soon be here!";
spans[2].textColor = color.green;
spans[2].fontStyle = "italic";
spans[2].underline = true;
spans[2].alignment = "right";

// Now give the rich field a rich value
annot.richContents = spans;
```

See also the Field object `richValue` method and the `event` object methods `richValue`, `richChange`, and `richChangeEx` for examples of using the `Span` object.

richDefaults

6.0	D		C

This property defines the default style attributes for a free text annotation. See the description of the Field object `defaultStyle` property for additional details.

Type

`Span` object

Access

R/W

Annotations

FreeText

rotate

5.0	D		C

The number of degrees (0, 90, 180, 270) the annotation is rotated counterclockwise relative to the page. This property is only significant for free text annotations.

Type

Integer

Access

R/W

Annotations

FreeText

seqNum

5.0			C

A read-only sequence number for the annotation on the page.

Type

Integer

Access

R

Annotations

All

soundIcon

5.0	D		C

The name of an icon to be used in displaying the sound annotation. A value of "Speaker" is recognized.

Type

String

Access

R/W

Annotations

Sound

state

6.0	D		C

The state of the text annotation. The values of this property depend on the stateModel. For a state model of Marked, values are Marked and Unmarked. For a Review state model, the values are Accepted, Rejected, Cancelled, Completed and None.

Type

String

Access

R/W

Annotations

Text

stateModel

6.0	D		C

Beginning with Acrobat 6.0, annotations may have an author-specific state associated with them. The state is specified by a separate text annotation that refers to the original annotation by means of its IRT entry (see the `inReplyTo` property). There are two types of state models, "Marked" and "Review".

Type

String

Access

R/W

Annotations

Text

See also the `getStateInModel` method.

strokeColor

5.0	D		C

Sets the appearance color of the annotation. Values are defined by using `transparent`, `gray`, `RGB` or `CMYK` color. In the case of a free text annotation, `strokeColor` sets the border and text colors. See "Color arrays" on page 193 for information on defining color arrays and how values are used with this property.

Type

Color

Access

R/W

Annotations

All

Example

Make a text note red.

```
var annot = this.addAnnot({type: "Text"});
annot.strokeColor = color.red;
```

style

5.0	D		C

This property gets and sets the border style. Recognized values are `S` (solid) and `D` (dashed). The style property is defined for all annotation types but is only relevant for line, free text, circle, square, polyline, polygon and ink annotations.

Type

String

Access

R/W

Annotations

All

See the `dash` property for an example.

subject

6.0	D		C

Text representing a short description of the subject being addressed by the annotation. The text appears in the title bar of the pop-up window, if there is one, or the properties dialog box.

Type

String

Access

R/W

Annotations

All

textFont

5.0	D		C

Determines the font that is used when laying out text in a free text annotation. Valid fonts are defined as properties of the `font` object (see the Field object `textFont` property).

An arbitrary font can be used when laying out a free text annotation by setting the value of `textFont` equal to a string that represents the PostScript name of the font.

Type

String

Access

R/W

Annotations

FreeText

Example

Create a FreeText annotation using the Helvetica font.

```
var annot = this.addAnnot({
page: 0,
type: "FreeText",
textFont: font.Helv, // or, textFont: "Viva-Regular",
textSize: 10,
rect: [200, 300, 200+150, 300+3*12], // height for three lines
width: 1,
alignment: 1 });
```

textSize

5.0	D		C

The text size (in points) for a free text annotation. Valid text sizes include zero and the range from 4 to 144, inclusive. Zero indicates the largest point size that allows all the text to fit in the annotation's rectangle.

Type

Number

Access

R/W

Annotations

FreeText

Example

See the `textFont` property.

toggleNoView

6.0	D		C

If `true`, the `noView` flag is toggled when the mouse hovers over the annotation or the annotation is selected.

If an annotation has both the `noView` and `toggleNoView` flags set, the annotation is usually invisible. However, when the mouse is over it or it is selected, it becomes visible.

Type

Boolean

Access

R/W

Annotations

All

type

5.0			C

The type of annotation. The type of an annotation can only be set within the object-literal argument of the Doc object `addAnnot` method. The valid values are:

```
Text
FreeText
Line
Square
Circle
Polygon
PolyLine
Highlight
Underline
Squiggly
StrikeOut
Stamp
Caret
Ink
FileAttachment
Sound
```

Type

String

Access

R

Annotations

All

vertices

6.0	D		C

An array of coordinate arrays representing the alternating horizontal and vertical coordinates, respectively, of each vertex, in default user space of a polygon or polyline annotation. See the *PDF Reference* version 1.7 for details.

Type

Array of arrays

Access

R/W

Annotations

Polygon, PolyLine

width

5.0	D		C

The border width in points. If this value is 0, no border is drawn. The default value is 1.

Type

Number

Access

R/W

Annotations

Square, Circle, Line, Ink, FreeText

Annotation methods

destroy

5.0	D		C

Destroys the annotation, removing it from the page. The object becomes invalid.

Example

Remove all "FreeText" annotations on page 0.

```
var annots = this.getAnnots({ nPage:0 });
for (var i = 0; i < annots.length; i++)
   if (annots[i].type == "FreeText") annots[i].destroy();
```

getProps

5.0			

Get the collected properties of an annotation. Can be used to copy an annotation.

Returns

An object literal of the properties of the annotation. The object literal is just like the one passed to the Doc object `addAnnot` method.

Example 1

Copy a given annotation to every page in the document.

```
var annot = this.addAnnot({
   page: 0,
   type: "Text",
   rect: [40, 40, 140, 140]
});

// Make a copy of the properties of annot
var copy_props = annot.getProps();

// Now create a new annot with the same properties on every page
var numpages = this.numPages;
for (var i=0; i < numpages; i++) {
   var copy_annot = this.addAnnot(copy_props);
   // but move it to page i
   copy_annot.page=i;
}
```

Example 2

Display all properties and values of an annotation.

```
var a = this.getAnnots(0); // get all annots on page 0
if ( a != null ) {
   var p = a[0].getProps();// get the properties of first one
   for ( o in p ) console.println( o + " : " + p[o] );
}
```

getStateInModel

6.0			

Gets the current state of the annotation in the context of a state model. See also the `transitionToState` method.

Parameters

`cStateModel`	The state model to determine the state of the annotation.

Returns

The result is an array of the identifiers for the current state of the annotation:

- If the state model was defined to be exclusive, there is only a single state (or no states if the state has not been set).
- If the state model is non-exclusive, there may be multiple states (or no entries if the state has not been set and there is no default).

Example

Report on the status of all annotations on all pages of this document.

```
annots = this.getAnnots()
for ( var i= 0; i< annots.length; i++) {
   states = annots[i].getStateInModel("Review");
   if ( states.length > 0 ) {
      for(j = 0; j < states.length; j++)
      {
         var d = util.printd(2, states[j].modDate);
         var s = states[j].state;
         var a = states[j].author;

         console.println(annots[i].type + ": " + a + " "
            + s + " " + d + "on page "
            + (annots[i].page+1) );
      }

   }
}
```

setProps

5.0	D		C

Sets many properties of an annotation simultaneously.

Parameters

object literal	A generic object that specifies the properties of the `Annotation` object to be created (such as `type`, `rect`, and `page`). This object is the same as the parameter of the Doc object `addAnnot` method.

Returns

The `Annotation` object

Example

Set various properties of a Line annotation.

```
var annot = this.addAnnot({type: "Line"})
annot.setProps({
   page: 0,
   points: [[10,40],[200,200]],
   strokeColor: color.red,
   author: "A. C. Robat",
   contents: "Check with Jones on this point.",
   popupOpen: true,
   popupRect: [200, 100, 400, 200], // Place rect at tip of the arrow
   arrowBegin: "Diamond",
   arrowEnd: "OpenArrow"
});
```

transitionToState

6.0	D		C

Sets the state of the annotation to `cState` by performing a state transition. The state transition is recorded in the audit trail of the annotation.

See also the `getStateInModel` method.

Note: For the states to work correctly in a multiuser environment, all users must have the same state model definitions. Therefore, it is best to place state model definitions in a folder-level JavaScript file that can be distributed to all users or installed on all systems.

Parameters

`cStateModel`	The state model in which to perform the state transition. `cStateModel` must have been previously added by calling the `Collab` method `addStateModel`.
`cState`	A valid state in the state model to transition to.

Example

Define a custom set of transition states, then set the state of an annotation.

```
try {
   // Create a document
   var myDoc = app.newDoc();
   // Create an annot
   var myAnnot = myDoc.addAnnot
   ({
      page: 0,
      type: "Text",
      point: [300,400],
      name: "myAnnot",
   });
   // Create the state model
   var myStates = new Object();
   myStates["initial"] = {cUIName: "Haven't reviewed it"};
   myStates["approved"] = {cUIName: "I approve"};
   myStates["rejected"] = {cUIName: "Forget it"};
   myStates["resubmit"] = {cUIName: "Make some changes"};
   Collab.addStateModel({
      cName: "ReviewStates",
      cUIName: "My Review",
      oStates: myStates,
      cDefault: "initial"
   });
} catch(e) { console.println(e); }
// Change the states
myAnnot.transitionToState("ReviewStates", "resubmit");
myAnnot.transitionToState("ReviewStates", "approved");
```

Annot3D

An Annot3D object represents a particular Acrobat 3D annotation; that is, an annotation created using the Acrobat 3D Tool. The Annot3D object can be acquired from the Doc object methods `getAnnot3D` and `getAnnots3D`.

Annot3D properties

activated

7.0			

A Boolean value that indicates whether the annotation is displaying the 3D artwork (`true`) or just the posterboard picture (`false`).

See the `context3D` property.

Type

Boolean

Access

R/W

context3D

7.0			

If `activated` is `true`, this property returns the context of the 3D annotation (a `global` object containing the 3D scene.) (See the *JavaScript for Acrobat 3D Annotations API Reference* for more information.) If `activated` is `false`, this property returns `undefined`.

Type

`global` object

Access

R

innerRect

7.0			

An array of four numbers [x_{ll}, y_{ll}, x_{ur}, y_{ur}] specifying the lower-left x, lower-left y, upper-right *x* and upper-right *y* coordinates, in the coordinate system of the annotation (lower-left is [0, 0], top right is [width, height]), of the 3D annotation's 3DB box, where the 3D artwork is rendered.

Type

Array

Access

R

name

7.0			

The name of the annotation.

Type

String

Access

R

page

7.0			

The 0-based page number of the page containing the annotation.

Type

Integer

Access

R

rect

7.0			

Returns an array of four numbers [x_{ll}, y_{ll}, x_{ur}, y_{ur}] specifying the lower-left x, lower-left y, upper-right *x* and upper-right *y* coordinates, in default user space, of the rectangle defining the location of the annotation on the page.

Type

Array

Access

R/W

app

A static JavaScript object that represents the Acrobat application. It defines a number of Acrobat-specific functions plus a variety of utility routines and convenience functions.

app properties

activeDocs

5.0		S	

An array containing the Doc object for each active document. If no documents are active, `activeDocs` returns nothing; that is, it has the same behavior as `d = new Array(0)` in core JavaScript.

In versions of Acrobat earlier than 7.0, executing the script `d = app.activeDocs` in the console returned `[object Global]` to the console. Beginning with Acrobat 7.0, no `toString()` value is output to the console.

Note: You should be aware of the following version-related information:

- In Acrobat 5.0, this property returns an array containing the Doc object for each active document.
- In Acrobat 5.0.5, this property was changed to return an array of Doc objects of only those open documents that have the Doc object `disclosed` property set to `true`.
- Beginning with the Acrobat 5.0.5 Accessibility and Forms Patch and continuing with Acrobat 6.0 and later, the behavior is as follows: During a batch, console or menu event, `activeDocs` ignores the `disclosed` property and returns an array of Doc objects of the active documents. During any other event, `activeDocs` returns an array of Doc objects of only those active documents that have `disclosed` set to `true`.
- Beginning with Acrobat 7.0, execution of JavaScript through a menu event is no longer privileged. See "Privileged versus non-privileged context" on page 32 for details.

The array returned by `app.activeDocs` includes any documents opened by `app.openDoc` with the `bHidden` parameter set to `true`, subject to the security restrictions described above.

Type

Array

Access

R

Example

This example searches among the open documents for the document with a title of `myDoc`, then inserts a button in that document using the Doc object `addField` method. Whether the documents must be `disclosed` depends on the version of Acrobat executing this code and on the placement of the code (for example, console versus mouse-up action).

```
var d = app.activeDocs;
for (var i=0; i < d.length; i++)
if (d[i].info.Title == "myDoc") {
   var f = d[i].addField("myButton", "button", 0 , [20, 100, 100, 20]);
   f.setAction("MouseUp","app.beep(0)");
   f.fillColor=color.gray;
}
```

calculate

X			

If `true` (the default value), calculations can be performed. If `false`, calculations are not permitted.

The use of this property is discouraged; the Doc object property `calculate` is preferred.

Type

Boolean

Access

R/W

constants

7.0			

A wrapper object for holding various constant values. Currently, this property returns an object with a single property, `align`.

`app.constants.align` is an object that has the possible properties `left`, `center`, `right`, `top`, and `bottom`, indicating the type of alignment. These values can be used to specify alignment, such as when adding a watermark.

Type

Object

Access

R

Example

See the Doc object methods addWatermarkFromFile and addWatermarkFromText for examples.

focusRect

4.05	P		

Turns the focus rectangle on and off. The focus rectangle is the faint dotted line around buttons, check boxes, radio buttons, and signatures to indicate that the form field has the keyboard focus. A value of true turns on the focus rectangle.

Type

Boolean

Access

R/W

Example

Turn off the focus rectangle.

```
app.focusRect = false;
```

formsVersion

4.0			

The version number of the viewer forms software. Check this property to determine whether objects, properties, or methods in newer versions of the software are available if you want to maintain backward compatibility in your scripts.

Type

Number

Access

R

Example

```
if (typeof app.formsVersion != "undefined" && app.formsVersion >= 5.0)
{
     // Perform version specific operations here.
     // For example, toggle full screen mode
     app.fs.cursor = cursor.visible;
     app.fs.defaultTransition = "";
     app.fs.useTimer = false;
     app.fs.isFullScreen = !app.fs.isFullScreen;
}
else app.fullscreen = !app.fullscreen;
```

fromPDFConverters

6.0			

An array of file type conversion ID strings. A conversion ID string can be passed to the Doc object `saveAs` method.

Type

Array

Access

R

Example

List all currently supported conversion ID strings.

```
for ( var i = 0; i < app.fromPDFConverters.length; i++)
   console.println(app.fromPDFConverters[i]);
```

fs

5.0			

A `FullScreen` object, which can be used to access the fullscreen properties.

Type

Object

Access

R

Example

```
// This code puts the viewer into fullscreen (presentation) mode.
app.fs.isFullScreen = true;
```

See also `fullScreenObject.isFullScreen`.

fullscreen

X			

The use of this property is discouraged; it has been superseded by the `FullScreen` object property `isFullScreen`. The `fs` method returns a `FullScreen` object that can be used to access the fullscreen properties.

Controls whether the viewer is in full screen mode or regular viewing mode.

Note: A PDF document being viewed from within a web browser cannot be put into full screen mode. Full screen mode can be initiated from within the browser, but applies only to a document open in the Acrobat viewer application, if any, not to the browser itself.

Type

Boolean

Access

R/W

language

3.01			

The language of the running Acrobat viewer. It can be one of the following strings.

String	Language
`CHS`	Chinese Simplified
`CHT`	Chinese Traditional
`DAN`	Danish
`DEU`	German
`ENU`	English
`ESP`	Spanish
`FRA`	French
`ITA`	Italian

String	Language
KOR	Korean
JPN	Japanese
NLD	Dutch
NOR	Norwegian
PTB	Brazilian Portuguese
SUO	Finnish
SVE	Swedish

Type

String

Access

R

media

6.0			

Defines an extensive number of properties and methods useful for setting up and controlling a multimedia player.

See the app.media object for a listing of the properties and methods of this object, as well as numerous examples of use.

Type

Object

Access

R

monitors

6.0			

A Monitors object, which is an array containing one or more Monitor objects representing each of the display monitors connected to the user's system. Each access to app.monitors returns a new, up-to-date copy of this array.

A Monitors object also has several methods that can be used to select a display monitor. Alternatively, JavaScript code can look through the array explicitly.

Type

`Monitors` object

Access

R

Example

Count the number of display monitors connected to the user's system.

```
var monitors = app.monitors;
console.println("There are " + monitors.length
   + " monitor(s) connected to this system.");
```

numPlugIns

X			

Note: This method has been superseded by the `plugIns` property.

Indicates the number of plug-ins that have been loaded by Acrobat.

Type

Number

Access

R

openInPlace

4.0	P		

Specifies whether cross-document links are opened in the same window or opened in a new window.

Type

Boolean

Access

R/W

Example

Open cross-document links in the same window.

```
app.openInPlace = true;
```

platform

4.0			

The platform that the script is currently executing on. There are three valid values:

```
WIN
MAC
UNIX
```

Type

String

Access

R

plugIns

5.0			

An array of `PlugIn` objects representing the plug-ins that are currently installed in the viewer.

Type

Array

Access

R

Example

```
// Get array of PlugIn objects
var aPlugins = app.plugIns;
// Get number of plug-ins
var nPlugins = aPlugins.length;
// Enumerate names of all plug-ins
for ( var i = 0; i < nPlugins; i++)
   console.println("Plugin \#"+i+" is " + aPlugins[i].name);
```

printColorProfiles

6.0			✖

A list of available printer color spaces. Each of these values is suitable to use as the value of the `colorProfile` property of a `PrintParams` object.

Type

Array of Strings

Access

R

Example

Print out a listing of available printer color spaces:

```
var l = app.printColorProfiles.length
for ( var i = 0; i < l; i++)
   console.println("(" + (i+1) + ") " + app.printColorProfiles[i]);
```

printerNames

6.0			

A list of available printers. Each of these values is suitable to use in the `printerName` property of the `PrintParams` object. If no printers are installed on the system, an empty array is returned.

Type

Array of Strings

Access

R

Example

Print out a listing of available printers:

```
var l = app.printerNames.length
for ( var i = 0; i < l; i++)
   console.println("(" + (i+1) + ") " + app.printerNames[i]);
```

runtimeHighlight

6.0	P		

If `true`, the background color and hover color for form fields are shown.

Type

Boolean

Access

R/W

Example

If run-time highlighting is off (`false`), do nothing, otherwise change the preferences.

```
if (!app.runtimeHighlight)
{
   app.runtimeHighlight = true;
   app.runtimeHighlightColor = color.red;
}
```

runtimeHighlightColor

6.0	P		

Sets the color for runtime highlighting of form fields.

The value of this property is a color array. (See "Color arrays" on page 193 for details.)

Type

Color array

Access

R/W

Example

See the `runtimeHighlight` property.

thermometer

6.0			

A `Thermometer` object, which is a combined status window/progress bar that indicates to the user that a lengthy operation is in progress.

Type

Object

Access

R

Example

See the `Thermometer` object.

toolbar

3.01	P		

Allows a script to show or hide both the horizontal and vertical Acrobat toolbars. It does not hide the toolbar in external windows (that is, in an Acrobat window within a web browser).

Type

Boolean

Access

R/W

Example

Hide the toolbar.

```
app.toolbar = false;
```

toolbarHorizontal

X	P		

Note: This property has been deprecated in Acrobat 5.0 and later. If accessed, it acts like `toolbar`.

Allows a script to show or hide the Acrobat horizontal toolbar. It does not hide the toolbar in external windows (that is, in an Acrobat window within a web browser).

Type

Boolean

Access

R/W

toolbarVertical

X	P		

Note: This property has been deprecated in Acrobat 5.0 and later. If accessed, it acts like `toolbar`.

Allows a script to show or hide the Acrobat vertical toolbar. It does not hide the toolbar in external windows (that is, in an Acrobat window within a web browser).

Type

Boolean

Access

R/W

viewerType

3.01			

A string that indicates which viewer application is running. It can be one of these values.

Value	Description
`Reader`	Acrobat Reader version 5.0 or earlier / Adobe Reader version 5.1 or later
`Exchange`	Adobe Acrobat earlier than version 6.0 / Acrobat Standard version 6.0 or later
`Exchange-Pro`	Acrobat Professional version 6.0 or later

Type

String

Access

R

viewerVariation

5.0			

Indicates the packaging of the running viewer application. It can be one of these values:

```
Reader
Fill-In
Business Tools
Full
```

Type

String

Access

R

viewerVersion

4.0			

Indicates the version number of the current viewer application.

Type

Number

Access

R

app methods

addMenuItem

5.0		S	

Adds a menu item to a menu.

Note: This method can only be executed during application initialization or console events. See the `event` object for a discussion of JavaScript events.

See also the `addSubMenu`, `execMenuItem`, `hideMenuItem`, and `listMenuItems` methods.

Parameters

`cName`	The language-independent name of the menu item. This name can be used by other methods (for example, `hideMenuItem`) to access the menu item.
`cUser`	(optional) The user string (language-dependent name) to display as the menu item name. If `cUser` is not specified, `cName` is used.
`cParent`	The name of the parent menu item. Its submenu will have the new menu item added to it. If `cParent` has no submenu, an exception is thrown. Menu item names can be obtained with the `listMenuItems` method.
`nPos`	(optional) The position within the submenu to locate the new menu item. The default behavior is to append to the end of the submenu. Specifying `nPos` as `0` adds the menu to the top of the submenu. Beginning with Acrobat 6.0, the value of `nPos` can also be the language-independent name of a menu item. (Acrobat 6.0) If the value `nPos` is a string, this string is interpreted as a named item in the menu (a language-independent name of a menu item). The named item determines the position at which the new menu item is to be inserted. See `bPrepend` for additional details. The `nPos` parameter is ignored in certain menus that are alphabetized. The alphabetized menus are • The first section of View > Navigation Panels. • The first section of View > Toolbars. • The first section of the Advanced submenu. **Note:** When `nPos` is a number, `nPos` is not obeyed in the Tools menu. A menu item introduced into the Tools menu comes in at the top of the menu. `nPos` is obeyed when it is a string referencing another user-defined menu item.
`cExec`	An expression string to evaluate when the menu item is selected by the user. **Note:** Beginning with Acrobat 7.0, execution of JavaScript through a menu event is no longer privileged. See "Privileged versus non-privileged context" on page 32 for details.
`cEnable`	(optional) An expression string that is evaluated to determine whether to enable the menu item. The default is that the menu item is always enabled. This expression should set `event.rc` to `false` to disable the menu item.
`cMarked`	(optional) An expression string that determines whether the menu item has a check mark next to it. The expression should set `event.rc` to `false` to uncheck the menu item and `true` to check it. The default is that the menu item is not marked.
`bPrepend`	(optional, Acrobat 6.0) Determines the position of the new menu item relative to the position specified by `nPos`. The default value is `false`. If `bPrepend` is `true`, the rules for insertion are as follows: • If `nPos` is a string, the new item is placed before the named item. • If `nPos` is a number, the new item is placed before the numbered item. • If the named item cannot be found or `nPos` is not between zero and the number of items in the list, inclusive, the new item is inserted as the first item in the menu (rather than at the end of the menu). `bPrepend` is useful when the named item is the first item in a group.

Example 1

At the top of the File menu, add a menu item that opens an alert dialog box displaying the active document title. This menu is only enabled if a document is opened.

```
app.addMenuItem({ cName: "Hello", cParent: "File",
   cExec: "app.alert(event.target.info.title, 3);",
   cEnable: "event.rc = (event.target != null);",
   nPos: 0
});
```

Example 2 (Acrobat 6.0)

Place two menu items in the File menu, one before the Close item and the other after the Close item.

```
// Insert after the "Close" item (the default behavior)
app.addMenuItem( { cName: "myItem1", cUser: "My Item 1", cParent:
   "File", cExec: "_myProc1()", nPos: "Close"});
// Insert before the "Close" item, set bPrepend to true.
app.addMenuItem( { cName: "myItem2", cUser: "My Item 2", cParent:
   "File", cExec: "_myProc2()", nPos: "Close", bPrepend: true });
```

addSubMenu

5.0		S	

Adds a menu item with a submenu to the application.

See also the `addMenuItem`, `execMenuItem`, `hideMenuItem`, and `listMenuItems` methods.

Note: This method can only be executed during application initialization or console events. See the `event` object for a discussion of JavaScript events.

Parameters

`cName`	The language-independent name of the menu item. This language-independent name is used to access the menu item (for example, for `hideMenuItem`).
`cUser`	(optional) The user string (language-dependent name) to display as the menu item name. If `cUser` is not specified, `cName` is used.
`cParent`	The name of the parent menu item to receive the new submenu. Menu item names can be discovered with `listMenuItems`.
`nPos`	(optional) The position within the parent's submenu to locate the new submenu. The default is to append to the end of the parent's submenu. Specifying `nPos` as `0` adds the submenu to the top of the parent's submenu. The `nPos` parameter is ignored in certain menus that are alphabetized. The alphabetized menus are • The first section of View > Navigational Panels. • The first section of View > Toolbars. • The first section of the Advanced submenu. **Note:** When `nPos` is a number, `nPos` is not obeyed in the Tools menu. A menu item introduced into the Tools menu comes in at the top of the menu. `nPos` is obeyed when `nPos` is a string referencing another user-defined menu item.

Example

See the newDoc method.

addToolButton

6.0			

Adds a button to the "Add-on" toolbar of Acrobat.

If there is an active document (for example, docA.pdf) open in Acrobat when this method is called to add a button, Acrobat will remove the button when docA.pdf is either no longer active or is closed. In the former case, the button will be automatically added to the toolbar if docA.pdf becomes the active document again.

The icon size is restricted to 20 by 20 pixels. If an icon of larger dimensions is used, an exception is thrown.

Note: (Acrobat 7.0) A number of changes have been made with regard to the secure use of this method. Execution of addToolButton in the console and application initialization is considered privileged execution and is trusted.

If this method is called from nonprivileged script, the warning "JavaScript Window" appears on the "Add-on" toolbar, which will not be dockable. (See "Privileged versus non-privileged context" on page 32.)

See also removeToolButton.

Parameters

cName	A unique language-independent identifier for the button. The language-independent name is used to access the button for other methods (for example, removeToolButton). **Note:** The value of cName must be unique. To avoid a name conflict, check listToolbarButtons, which lists all toolbar button names currently installed.
oIcon	An Icon Stream object. Beginning with Acrobat 7.0, this parameter is optional if a cLabel is provided.
cExec	The expression string to evaluate when the button is selected.
cEnable	(optional) An expression string that determines whether to enable the toolbutton. The default is that the button is always enabled. This expression should set event.rc to false to disable the button.
cMarked	(optional) An expression string that determines whether the toolbutton is marked. The default is that the button is not marked. This expression should set event.rc to true to mark the button.
cTooltext	(optional) The text to display in the button help text when the mouse is over the toolbutton. The default is not to have a tool tip. **Note:** Avoid the use of extended characters in the cTooltext string as the string may be truncated.

`nPos`	(optional) The button number to place the added button before in the toolbar. If `nPos` is `-1` (the default), the button is appended to the toolbar.
`cLabel`	(optional, Acrobat 7.0) A text label to be displayed on the button to the right of the icon. The default is not to have a label.

Returns

`undefined`

Example

Create a button from an icon graphic on the user's hard drive. This script is executed from the console.

```
// Create a document
var myDoc = app.newDoc();

// import icon (20x20 pixels) from the file specified
myDoc.importIcon("myIcon", "/C/myIcon.jpg", 0);

// convert the icon to a stream.
oIcon = util.iconStreamFromIcon(myDoc.getIcon("myIcon"));

// close the doc now that we have grabbed the icon stream
myDoc.closeDoc(true);

// add a toolbutton
app.addToolButton({
   cName: "myToolButton",
   oIcon: oIcon,
   cExec: "app.alert('Someone pressed me!')",
   cTooltext: "Push Me!",
   cEnable: true,
   nPos: 0
});

app.removeToolButton("myToolButton")
```

See also the example following `util.`iconStreamFromIcon.

alert

3.01			

Displays an alert dialog box.

Note: If this method is called on a button click event using LiveCycle Designer 7 or 8, it appends the title "Warning: JavaScript Window - " in Acrobat 8.

Parameters

`cMsg`	A string containing the message to be displayed.
`nIcon`	(optional) An icon type. Possible values are these: **0** — Error (default) **1** — Warning **2** — Question **3** — Status **Note:** In Mac OS, there is no distinction between warnings and questions.
`nType`	(optional) A button group type. Possible values are these: **0** — OK (default) **1** — OK, Cancel **2** — Yes, No **3** — Yes, No, Cancel
`cTitle`	(optional, Acrobat 6.0) The dialog box title. If not specified, the title "Adobe Acrobat" is used.
`oDoc`	(optional, Acrobat 6.0) The Doc object that the alert should be associated with.
`oCheckbox`	(optional, Acrobat 6.0) If specified, a check box is created in the lower left region of the alert box. `oCheckbox` is a generic JavaScript object that has three properties. The first two property values are passed to the `alert` method; the third property returns a Boolean value. **`cMsg`** — (optional) A string to display with the check box. If not specified, the default string is "Do not show this message again". **`bInitialValue`** — (optional) If `true`, the initial state of the check box is checked. The default is `false`. **`bAfterValue`** — When the alert method exits, contains the state of the check box when the dialog box is closed. If `true`, the check box was checked when the alert box is closed.

Returns

`nButton`, the type of the button that was pressed by the user:

1 — OK

2 — Cancel

3 — No

4 — Yes

Example 1

Display a simple alert box:

```
app.alert({
   cMsg: "Error! Try again!",
   cTitle: "Acme Testing Service"
});
```

Example 2

Close the document with the user's permission:

```
// A MouseUp action
var nButton = app.alert({
   cMsg: "Do you want to close this document?",
   cTitle: "A message from A. C. Robat",
   nIcon: 2, nType: 2
});
if ( nButton == 4 ) this.closeDoc();
```

Example 3 (Acrobat 6.0)

One document creates an alert box in another document. There are two documents, DocA and DocB, one open in a browser and the other in the viewer.

```
// The following is a declaration at the document level in DocA
var myAlertBoxes = new Object;
myAlertBoxes.oMyCheckbox = {
   cMsg: "Care to see this message again?",
   bAfterValue: false
}
```

The following is a mouse-up action in DocA. The variable `theOtherDoc` is the Doc object of DocB. The alert box asks if the user wants to see this alert box again. If the user clicks the check box, the alert does not appear again.

```
if ( !myAlertBoxes.oMyCheckbox.bAfterValue )
{
   app.alert({
      cMsg: "This is a message from the DocA?",
      cTitle: "A message from A. C. Robat",
      oDoc:theOtherDoc,
      oCheckbox: myAlertBoxes.oMyCheckbox
   });
}
```

beep

3.01			

Causes the system to play a sound.

Note: On Mac OS and UNIX systems the beep type is ignored.

Parameters

`nType`	(optional) The sound type. Values are associated with sounds as follows: **0** — Error **1** — Warning **2** — Question **3** — Status **4** — Default (default value)

beginPriv

7.0		S	

Raises the execution privilege of the current stack frame such that methods marked secure can execute without security exceptions. For the method to succeed, there must be a frame on the stack representing the execution of a trusted function, and all frames (including the frame making the call) between the currently executing frame and that frame must represent the execution of trust propagator functions.

Use `app.endPriv` to revoke privilege. The `app.trustedFunction` method can create a trusted function, and `app.trustPropagatorFunction` can create a trust propagator function. The term stack frame is discussed following the description of `app.trustedFunction`.

Returns

`undefined` on success, exception on failure

Example

For examples of usage, see `trustedFunction` and `trustPropagatorFunction`.

browseForDoc

7.0		S	7.0

Presents a file system browser and returns an object containing information concerning the user's response.

Note: This method can only be executed during a batch or console event. See the `event` object for a discussion of JavaScript events. See "Privileged versus non-privileged context" on page 32 for details.

Parameters

`bSave`	(optional) A Boolean value that, if `true`, specifies that the file system browser should be presented as it would be for a save operation. The default is `false`.
`cFilenameInit`	(optional) A string that specifies the default file name for the file system browser to be populated with.
`cFSInit`	(optional) A string that specifies the file system that the file system browser operates on initially. Two values are supported: "" (the empty string) representing the default file system and "CHTTP". The default is the default file system. This parameter is only relevant if the web server supports WebDAV.

Returns

On success, returns an object that has three properties.

Property	Description
`cFS`	A string containing the resulting file system name for the chosen file.
`cPath`	A string containing the resulting path for the chosen file.
`cURL`	A string containing the resulting URL for the chosen file

If the user cancels, the return value is `undefined`. On error, throws an exception.

Example 1

Browse for a document and report the results to the console.

```
var oRetn = app.browseForDoc({
   cFilenameInit: "myComDoc.pdf",
   cFSInit: "CHTTP",
});
if ( typeof oRetn != "undefined" )
   for ( var o in oRetn )
      console.println( "oRetn." + o + "=" + oRetn[o]);
else console.println("User cancelled!");
```

If the user selects a file on a WebDAV server, a possible output of this code is given below:

```
oRetn.cFS=CHTTP
oRetn.cPath=http://www.example.com/WebDAV/myComDoc.pdf
oRetn.cURL=http://www.example.com/WebDAV/myComDoc.pdf
```

Should the user select a file in the default file system, a typical output of this code is given below:

```
oRetn.cFS=DOS
oRetn.cPath=/C/temp/myComDoc.pdf
oRetn.cURL=file:///C|/temp/myComDoc.pdf
```

The script can go on to open the selected file using `app.openDoc`.

```
var myURL = (oRetn.cFS=="CHTTP") ? encodeURI(oRetn.cPath) : oRetn.cPath;
var oDoc = app.openDoc({cPath: myURL, cFS: oRetn.cFS});
```

Note: `app.openDoc` requires `cPath` to be an escaped string when retrieving a file from a WebDAV server. See `app.openDoc` for a brief description and example.

Example 2

Browse and save a document.

```
var oRetn = app.browseForDoc({
   bSave: true,
   cFilenameInit: "myComDoc.pdf",
   cFSInit: "CHTTP",
});
if ( typeof oRetn != "undefined" ) this.saveAs({
   cFS: oRetn.cFS, cPath: oRetn.cPath, bPromptToOverwrite: false});
```

clearInterval

5.0			

Cancels a previously registered interval initially set by the `setInterval` method.

See also `setTimeOut` and `clearTimeOut`.

Parameters

`oInterval`	The registered interval to cancel.

Example

See `setTimeOut`.

clearTimeOut

5.0			

Cancels a previously registered time-out interval. Such an interval is initially set by `setTimeOut`.

See also `setInterval` and `clearInterval`.

Parameters

`oTime`	The previously registered time-out interval to cancel.

Example

See `setTimeOut`.

endPriv

7.0		S	

Revokes any privilege bestowed upon the current stack frame by `app.beginPriv`. Does not revoke privilege bestowed by the current event.

Related methods are `app.trustedFunction`, `app.trustPropagatorFunction` and `app.beginPriv`.

Returns

`undefined` on success, exception on failure

Example

For examples of usage, see `trustedFunction` and `trustPropagatorFunction`.

execDialog

7.0			

Presents a modal dialog box to the user. Modal dialog boxes must be closed by the user before the host application can be directly used again.

The `monitor` parameter specifies a *dialog descriptor*, which is a generic object literal that consists of a set of handler functions for various events and a set of properties that describe the contents of the dialog box.

Dialog box items are identified by an *ItemID*, which is a unique 4-character string. An *ItemID* is necessary only if the element must be referred to elsewhere in the dialog box description (for example, to set or get a value for the element, to add a handler for the element, or to set a tab order including the element).

Note: To distinguish Acrobat dialog boxes from those created by JavaScript, dialog boxes that are added at the document level have a title of "JavaScript Dialog" and display the text "Warning: JavaScript Dialog" at the bottom.

Parameters

`monitor`	An object literal. It consists of several handlers (see "Dialog box handlers" on page 108) and a `description` property that describes the dialog box elements (see "description property" on page 108).
`inheritDialog`	(optional) A `Dialog` object that should be reused when displaying this dialog box. It is useful when displaying a series of dialog boxes (such as a wizard) to prevent one from disappearing before the new one is displayed. The default is not to reuse a dialog box.
`parentDoc`	(optional) A Doc object to use as the parent for this dialog box. The default parent is the Acrobat application.

Returns

A string, which is the *ItemID* of the element that caused the dialog box to be dismissed. The return value is "ok" or "cancel" if the dismissing element is the `ok` or `cancel` button.

Note: Debugging is disabled while a modal dialog box created by `app.execDialog` is active.

Dialog box handlers

The dialog box handlers are called when specific dialog box events occur. Each handler is optional and is passed a `Dialog` object that can be used to query or set values in the dialog box. The supported handlers are listed in the table that follows.

Dialog box handler	Description
`initialize`	Called when the dialog box is being initialized.
`validate`	Called when a field is modified to determine if the value is acceptable (by returning `true`) or unacceptable (by returning `false`).
`commit`	Called when the OK button of the dialog box is clicked.
`destroy`	Called when the dialog box is being destroyed.

ItemID	Called when the dialog box element *ItemID* is modified. For a text box, it is when the text box loses focus. For other controls, it is when the selection changes.
	If *ItemID* is not a JavaScript identifier, the name must be enclosed in double quotes when the method is defined, as in the following example.
	`"bt:1": function () { .... }`
	If *ItemID* is a JavaScript identifier, the double quotes are optional. For example, the following are both correct.
	`"butn": function () { .... }`
	`butn: function () { .... }`

description property

The `description` property is an object literal that contains properties describing the dialog. Its `elements` property specifies the elements of the dialog box, and each of the elements in turn can have an `elements` property describing subelements.

The dialog properties at the root level of the `description` property are listed in the table that follows.

Property	Type	Description
`name`	String	The title bar of the dialog box, which should be localized.
`first_tab`	String	An *ItemID* for the dialog box item that should be first in the tab order. This dialog box item will also be active when the dialog box is created. This property is required for setting up a tabbing order. See the `next_tab` property defined below.
`width`	Numeric	The width of the dialog box in pixels. If no width is specified, the combined width of the contents is used.
`height`	Numeric	The height of the dialog box in pixels. If no height is specified, the combined height of the contents is used.
`char_width`	Numeric	The width of the dialog box in characters. If no width is specified, the combined width of the contents is used.
`char_height`	Numeric	The height of the dialog box in characters. If no height is specified, the combined height of the contents is used.

Property	Type	Description
`align_children`	String	The alignment for all descendants. Must be one of the following values: "align_left": Left aligned "align_center": Center aligned "align_right": Right aligned "align_top": Top aligned "align_fill": Align to fill the parent's width; may widen objects. "align_distribute": Distribute the contents over the parent's width. "align_row": Distribute the contents over the parent's width with a consistent baseline. "align_offscreen": Align items one on top of another.
`elements`	Array	An array of *object literals* that describe the dialog box elements contained within this dialog (see `elements property`).

elements property

A dialog box `elements` property specifies an object literal with the following set of properties.

Property	Type	Description
`name`	String	The displayed name of the dialog box element, which should be localized. **Note:** This property is ignored for the "edit_text" type.
`item_id`	String	An *ItemID* for this dialog box, which is a unique 4-character string.
`type`	String	The type of this dialog box element. It must be one of the following strings: "button" - A push button. "check_box" - A check box. "radio" - A radio button. "list_box" - A list box. "hier_list_box" - A hierarchical list box. "static_text" - A static text box. "edit_text" - An editable text box. "popup" - A pop-up control. "ok" - An OK button. "ok_cancel" - An OK and Cancel Button. "ok_cancel_other" - An OK, Cancel, and Other button. "view" - A container for a set controls. "cluster" - A frame for a set of controls. "gap" - A place holder.

Property	Type	Description
`next_tab`	String	An *ItemID* for the next dialog box item in the tab order. **Note:** Tabbing does not stop at any dialog box item that is not the target of the `next_tab` (or `first_tab`) property. Tabbing should form a circular linked list.
`width`	Numeric	Specifies the width of the element in pixels. If no width is specified, the combined width of the contents is used.
`height`	Numeric	Specifies the height of the element in pixels. If no height is specified, the combined height of the contents is used.
`char_width`	Numeric	Specifies the width of the element in characters. If no width is specified, the combined width of the contents is used.
`char_height`	Numeric	Specifies the height of the element in characters. If no height is specified, the combined height of the contents is used.
`font`	String	The font to use for this element. Must be one of the following strings: "default" - Default font "dialog" - Dialog box font "palette" - Palette (small) Font
`bold`	Boolean	Specify if the font is bold.
`italic`	Boolean	Specify if the font is italic.
`alignment`	String	Sets the alignment for this element. Must be one of the following values: "align_left": Left aligned "align_center": Center aligned "align_right": Right aligned "align_top": Top aligned "align_fill": Align to fill the parent's width; may widen objects. "align_distribute": Distribute the contents over the parent's width. "align_row": Distribute the contents over the parent's width with a consistent baseline. "align_offscreen": Align items one on top of another.
`align_children`	String	Sets the alignment for all descendants. Possible values are the same as for `alignment`.
`elements`	Array	An array of object literals that describe the subelements of this dialog box element. Its properties are the same as those described in this table.

Additional attributes of some dialog box elements

Some of the element types have additional attributes, as listed below.

Element type	Property	Type	Description
static_text	`multiline`	Boolean	If `true`, this static text element is multiline. **Note:** For Mac OS, the height property must be at least 49 to display the up/down buttons, which allow users to read the whole box content.
edit_text	`multiline`	Boolean	If `true`, this edit text element is multiline.
	`readonly`	Boolean	If `true`, this text element is read only. **Note:** This property is ignored when `password` is set to `true`.
	`password`	Boolean	If `true`, this text element is a password field.
	`PopupEdit`	Boolean	If `true`, it is a pop-up edit text element.
	`SpinEdit`	Boolean	If `true`, it is a spin edit text element.
radio	`group_id`	String	The group name to which this radio button belongs.
ok, ok_cancel, ok_cancel_other	`ok_name`	String	The name for the OK button.
	`cancel_name`	String	The name for the cancel button.
	`other_name`	String	The name for the other button.

Example 1

The following dialog box descriptor can be a document-level or folder-level JavaScript. The dialog box created contains text fields for your first and last name. When the OK button is clicked, the names entered are reported to the console.

```
var dialog1 = {

   initialize: function (dialog) {
      // Create a static text containing the current date.
      var todayDate = dialog.store()["date"];
      todayDate = "Date: " + util.printd("mmmm dd, yyyy", new Date());
      dialog.load({ "date": todayDate });
   },
   commit:function (dialog) { // called when OK pressed
      var results = dialog.store();
      // Now do something with the data collected, for example,
      console.println("Your name is " + results["fnam"]
         + " " + results["lnam"] );
   },
```

```
description:
{
  name: "Personal Data",    // Dialog box title
  align_children: "align_left",
  width: 350,
  height: 200,
  elements:
  [
    {
      type: "cluster",
      name: "Your Name",
      align_children: "align_left",
      elements:
      [
        {
          type: "view",
          align_children: "align_row",
          elements:
          [
            {
              type: "static_text",
              name: "First Name: "
            },
            {
              item_id: "fnam",
              type: "edit_text",
              alignment: "align_fill",
              width: 300,
              height: 20
            }
          ]
        },
        {
          type: "view",
          align_children: "align_row",
          elements:
          [
            {
              type: "static_text",
              name: "Last Name: "
            },
            {
              item_id: "lnam",
              type: "edit_text",
              alignment: "align_fill",
              width: 300,
              height: 20
            }
          ]
        },
        {
          type: "static_text",
          name: "Date: ",
```

```
            char_width: 25,
            item_id: "date"
          },
        ]
      },
      {
        alignment: "align_right",
        type: "ok_cancel",
        ok_name: "Ok",
        cancel_name: "Cancel"
      }
    ]
  }
};
```

Now, the following line can be executed from actions such as the mouse-up action of a button or a menu action.

```
app.execDialog(dialog1);
```

Example 2

The following example uses a check box and a radio button field. This code might be a document-level JavaScript.

```
var dialog2 =
{
  initialize: function(dialog) {
    // Set a default value for radio button field
    dialog.load({"rd01": true });
    this.hasPet = false;
    // Disable radio button field
    dialog.enable({
      "rd01" : this.hasPet,
      "rd02" : this.hasPet,
      "rd03" : this.hasPet
    });
  },
  commit: function(dialog) {
    // When the user presses "Ok", this handler will execute first
    console.println("commit");
    var results = dialog.store();
    // Do something with the data, for example,
    var hasPet = (this.hasPet) ? "have" : "don't have";
    console.println("You " + hasPet + " a pet.");
    if (this.hasPet)
      console.println("You have " + this.getNumPets(results)
        + " pet(s).");
  },
  getNumPets: function (results) {
    for ( var i=1; i<=3; i++) {
      if ( results["rd0"+i] ) {
        switch (i) {
          case 1:
            var nPets = "one";
            break;
```

```
            case 2:
               var nPets = "two";
               break;
            case 3:
               var nPets = "three or more";
         }
      }
   };
   return nPets;
},
ok: function(dialog) {
   // The handler for the Ok button will be handed after commit
   console.println("Ok!");
},
ckbx: function (dialog) {
   // Process the checkbox, if the user has a pet, turn on radios
   this.hasPet = !this.hasPet;
   dialog.enable({
      "rd01" : this.hasPet,
      "rd02" : this.hasPet,
      "rd03" : this.hasPet
   });
},
cancel: function(dialog) { // Handle the cancel button
   console.println("Cancel!");
},
other: function(dialog){ // Handle the other button
   app.alert("Thanks for pressing me!");
   dialog.end("other"); // End the dialog box, return "other"!
},
// The dialog box description
description:
{
   name: "More Personal Information",
   elements:
   [
      {
         type: "view",
         align_children: "align_left",
         elements:
         [
            {
               type: "static_text",
               name: "Personal Information",
               bold: true,
               font: "dialog",
               char_width: 30,
               height: 20
            },
            {
               type: "check_box",
               item_id: "ckbx",
               name: "Pet Owner"
            },
            {
```

```
                    type: "view",
                    align_children: "align_row",
                    elements:
                    [
                       {
                          type: "static_text",
                          name: "Number of pets: "
                       },
                       {
                          type: "radio",
                          item_id: "rd01",
                          group_id: "rado",
                          name: "One"

                       },
                       {
                          type: "radio",
                          item_id: "rd02",
                          group_id: "rado",
                          name: "Two",
                       },
                       {
                          type: "radio",
                          item_id: "rd03",
                          group_id: "rado",
                          name: "Three or more",
                       }
                    ]
                 }
              ]
           },
           {
              type: "gap",  //Add a small vertical gap between
              height: 10    //..radio fields and buttons
           },
           {
              type: "ok_cancel_other",
              ok_name: "Ok",
              cancel_name: "Cancel",
              other_name: "Press Me"
           }
        ]
     }
  };
```

The following line can be executed in situations such as the mouse-up action of a button or a menu action.

```
var retn = app.execDialog(dialog2);
```

The value of `retn` is “ok” if the Ok button was clicked, “cancel” if the Cancel button was clicked, and “other” if the button labeled “Press Me” was clicked.

Example 3

This example uses a list box.

```
var dialog3 = {
   // This dialog box is called when the dialog box is created
   initialize: function(dialog) {
      this.loadDefaults(dialog);
   },
   // This dialog box is called when the OK button is clicked.
   commit: function(dialog) {
        // See the Dialog object for a description of how dialog.load
        // and dialog.store work.
        var elements = dialog.store()["subl"];
        // do something with the data.
   },
   // Callback for when the button "butn" is clicked.
   butn: function(dialog) {
      var elements = dialog.store()["subl"]
      for(var i in elements) {
         if ( elements[i] > 0 ) {
            app.alert("You chose \"" + i
               + "\", which has a value of " + elements[i] );
         }
      }
   },
   loadDefaults: function (dialog) {
      dialog.load({
         subl:
         {
            "Acrobat Professional": +1,
            "Acrobat Standard": -2,
            "Adobe Reader": -3
         }
      })
   },
   // The dialog box description
   description:
   {
      name: "Adobe Acrobat Products", // Title of the dialog box
      elements: // Child element array
      [
         {
            type: "view",
            align_children: "align_left",
            elements: // Child element array
            [
               {
                  type: "cluster",
                  name: "Select",
                  elements: // Child Element Array
                  [
                     {
                        type: "static_text",
                        name: "Select Acrobat you use",
```

```
                font: "default"
             },
             {
                type: "list_box",
                item_id: "subl",
                width: 200,
                height: 60
             },
             {
                type: "button",
                item_id: "butn",
                name: "Press Me"
             }
          ]
       },
       {
          type: "ok_cancel"
       }
    ]
  }
 ]
}
}
```

Then execute

```
app.execDialog(dialog3);
```

In the example above, if the line `type: "list_box"` is replaced by `type: "popup"` and the `height` specification is removed, the example will run with a pop-up control rather than a list box.

Example 4

This example shows a hierarchical list box. After the dialog box is opened, a hierarchical list is presented. After a selection is made and the user clicks the Select button, the document jumps to the destination chosen by the user. The Doc object is passed to the dialog box by making it a property of the dialog box.

```
var dialog4 = {
  initialize: function(dialog) {
    dialog.load({
      subl:
        {
          "Chapter 1":
          {
            "Section 1":
            {
              "SubSection 1": -1,
              "SubSection 2": -2,
            },
            "Section 2":
            {
              "SubSection 1": -3,
              "SubSection 2": -4,
            }
          },
          "Chapter 3": -5,
```

```
            "Chapter 4": -6
         }
   })
},
subl: function(dialog) {
   console.println("Selection Box Hit");
},
getHierChoice: function (e)
{
   if (typeof e == "object") {
      for ( var i in e ) {
         if ( typeof e[i] == "object" ) {
            var retn = this.getHierChoice(e[i]);
            if ( retn ) {
               retn.label = i + ", " + retn.label;
               return retn;
            }
         // if e[i] > 0, we've found the selected item
         } else  if ( e[i] > 0 ) return { label:i, value: e[i] };
      }
   } else {
      if ( e[i] > 0 ) return e[i];
   }
},
butn: function (dialog)
{
   var element = dialog.store()["subl"]
   var retn = this.getHierChoice(element);
   if ( retn ) {
      // Write to the console the full name of the item selected
      console.println("The selection you've chosen is \""
           + retn.label + "\", its value is " + retn.value );
      dialog.end("ok");
      // this.doc is the doc object of this document
      this.doc.gotoNamedDest("dest"+retn.value);
   }
   else app.alert("Please make a selection, or cancel");
},
cncl: function (dialog) { dialog.end("cancel") },
// Dialog box description
description:
{
   name: "My Novel",
   elements:
   [
      {
         type: "view",
         align_children: "align_left",
         elements:
         [
            {
               type: "cluster",
               name: "Book Headings",
```

```
                elements:
                [
                   {
                      type: "static_text",
                      name: "Make a selection",
                   },
                   {
                      type: "hier_list_box",
                      item_id: "subl",
                      char_width: 20,
                      height: 200
                   }
                ]
             },
             {
                type: "view",
                align_children: "align_row",
                elements:
                [
                   {
                      type: "button",
                      item_id: "cncl",
                      name: "Cancel"
                   },
                   {
                      item_id: "butn",
                      type: "button",
                      name: "Select"
                   }
                ]
             }
          ]
       }
    ]
 }
};
```

This function attaches the Doc object to the dialog box, then passes the dialog box to the `app.execDialog` method. The `dialog4` object and this function can be at the document level.

```
function dotheDialog(dialog,doc)
{
   dialog.doc = doc;
   var retn = app.execDialog( dialog )
}
```

Finally, the following script can be executed from a mouse-up action, for example.

```
dotheDialog( dialog4, this );
```

Example 5

See "Example 2" on page 147, which shows how to execute privileged code from a non-privileged context.

execMenuItem

4.0		S	

Executes the specified menu item.

Beginning with Acrobat 5.0, `app.execMenuItem("SaveAs")` can be called, subject to the restrictions described below. Executing the Save As menu item saves the current file to the user's hard drive after presenting a dialog box asking the user to select a folder and file name. The file is saved as a linearized file if "Save As Optimizes for Fast Web View" is checked in the Documents preferences.

Note: (Acrobat 7.0) In previous versions of Acrobat, the following code could only be executed during a batch, console or menu event.

```
app.execMenuItem("SaveAs");
```

Acrobat 7.0 removes this restriction, so that `app.execMenuItem("SaveAs")` can be executed during a mouse-up event, for example.

If the user preferences are set to "Save As Optimizes for Fast Web View", a form object will not survive a Save As operation. Field objects are no longer valid, and an exception may be thrown when trying to access a Field object immediately after saving. See the examples that follow.

For security reasons, scripts are not allowed to execute the Quit menu item. Beginning with Acrobat 6.0, scripts are not allowed to execute the Paste menu item.

(Acrobat 8.0) The execution of menu items through `execMenuItem` method is restricted to a short list of safe menus. The `execMenuItem` method will *silently fail* if a named menu item is executed that is not on the safe menu list. Menu items *may be removed* in future releases, or their *behavior may change*.

To see the list of safe menus, create a form button, and in the Button Properties dialog box, select the Actions tab. From the Select Action list, select "Execute a menu item". Finally, click the Add button to see the Menu Item dialog box with the list of safe menus.

The `app.execMenuItem` method may be executed, without restriction, in a privileged context, such as in the console or in a batch sequence. For folder JavaScript, `app.execMenuItem` can be executed, again, without restriction, through a trusted function with raised privilege. See Example 4, below.

Another approach to executing `app.execMenuItem` without restriction is through Sign & Certify. When the document author signs and certifies the document, privileged methods can be executed from a non-privileged context provided the document consumer lists the author's certificate in the

list of trusted identities and the consumer trusts the author for execution of embedded high privilege JavaScript.

To ensure a secure environment, the menu items that can be executed are limited to the following:

- AcroSendMail:SendMail
- ActualSize
- AddFileAttachment
- BookmarkShowLocation
- Close
- CropPages
- DeletePages
- ExtractPages
- Find
- FindCurrentBookmark
- FindSearch
- FirstPage
- FitHeight
- FitPage
- FitVisible
- FitWidth
- FullScreen
- GeneralInfo (Properties)
- GeneralPrefs
- GoBack
- GoForward
- GoToPage
- InsertPages
- LastPage
- NextPage
- OneColumn
- OpenOrganizer
- PageSetup
- PrevPage
- Print
- PropertyToolbar
- Quit
- ReplacePages
- RotatePages
- SaveAs

- Scan
- ShowHideAnnotManager
- ShowHideArticles
- ShowHideBookmarks
- ShowHideFields
- ShowHideFileAttachment
- ShowHideModelTree
- ShowHideOptCont
- ShowHideSignatures
- ShowHideThumbnails
- ShowHideToolbarBasicTools
- ShowHideToolbarCommenting
- ShowHideToolbarData
- ShowHideToolbarEdit
- ShowHideToolbarEditing
- ShowHideToolbarFile
- ShowHideToolbarFind
- ShowHideToolbarForms
- ShowHideToolbarMeasuring
- ShowHideToolbarNavigation
- ShowHideToolbarPageDisplay
- ShowHideToolbarPrintProduction
- ShowHideToolbarRedaction
- ShowHideToolbarTasks
- ShowHideToolbarTypewriter
- SinglePage
- Spelling
- Spelling:Check
- TwoColumns
- TwoPages
- Web2PDF:OpenURL
- ZoomTo
- ZoomViewIn
- ZoomViewOut

This list applies only to document-level access to menu items. It does not apply to application-level JavaScript or JavaScript from a privileged context.

The list is written to the Acrobat registry and can be edited if you determine that the list must be expanded. If you need to modify the list, you can edit the related registry entries:

- The key for the default list is HKEY_LOCAL_MACHINE\SOFTWARE\Policies\Adobe\Adobe Acrobat\8.0\FeatureLockDown\cDefaultExecMenuItems.
- The key for the list used by Tuner is HKEY_LOCAL_MACHINE\SOFTWARE\Policies\Adobe\Adobe Acrobat\8.0\FeatureLockDown\cAdminExecMenuItems.

For both keys, the value name is `tWhiteList` and the type is `REG_SZ`. The value data contains all menu item names and each menu item name is separated with the "|" delimiter.

See also `addMenuItem`, `addSubMenu`, and `hideMenuItem`. Use `listMenuItems` to have the console list the names of all menu items.

Parameters

`cMenuItem`	The menu item to execute. A list of menu item names can be obtained with `listMenuItems`.
`oDoc`	(optional, Acrobat 7.0) `oDoc` is the Doc object of a document that is not hidden (see the Doc object `hidden` property). If this parameter is present, `execMenuItem` executes the menu item in the document's context.

Example 1

This example executes the File > Open menu item. It displays a dialog box asking for the file to be opened.

```
app.execMenuItem("Open");
```

Example 2 (Acrobat 5.0)

This example illustrates how a form object does not survive the execution of `app.execMenuItem("SaveAs")`, as noted above.

```
var f = this.getField("myField");
// Assume preferences set to save linearized
app.execMenuItem("SaveAs");
// Exception thrown, field not updated
f.value = 3;
```

Example 3 (Acrobat 5.0)

After executing `app.execMenuItem("SaveAs")`, Field objects must be acquired again.

```
var f = this.getField("myField");
// Assume preferences set to save linearized
app.execMenuItem("SaveAs");
// Get the field again after the linear save
var f = getField("myField");
// Field updated to a value of 3
f.value = 3;
```

Example 4 (Acrobat 8.0)

Execute `app.execMenuItem` in folder JavaScript using a trusted function.

```
myTrustedMenu = app.trustedFunction( function( name )
```

```
{
   app.beginPriv();
   app.execMenuItem(name);
   app.endPriv();
});
```

Once Acrobat or Adobe Reader is restarted, the script, for example,

```
myTrustedMenu("PropertyToolbar");
```

may be executed from a non-privileged context, such as a mouse-up button action, without silent failure. The script above shows/hides the Properties toolbar.

getNthPlugInName

Note: This method has been superseded by the `plugIns` property.

Obtains the name of the *n*th plug-in that has been loaded by the viewer.

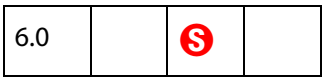
Parameters

`nIndex`	The *n*th plug-in loaded by the viewer.

Returns

`cName`, the plug-in name that corresponds to `nIndex`.

getPath



Returns the path to folders created during installation. A distinction is made between application folders and user folders. The method throws a `GeneralError` exception (see `Error` object) if the path does not exist.

Note: (Acrobat 7.0) This method can only be executed during a batch or console event (see the `event` object). See also "Privileged versus non-privileged context" on page 32.

Parameters

`cCategory`	(optional) The category of folder sought. Valid values are `app` (the default) and `user`.
`cFolder`	(optional) A platform-independent string that indicates the folder. Valid values are `root, eBooks, preferences, sequences, documents, javascript, stamps, dictionaries, plugIns spPlugIns,help, temp, messages, resource, update` The default is `root`.

Returns

The path to the folder determined by the parameters. An exception is thrown if the folder does not exist.

Example 1

Find the path to the user's Sequences folder.

```
try {
   var userBatch = app.getPath("user","sequences");
} catch(e) {
   var userBatch = "User has not defined any custom batch sequences";
}
console.println(userBatch);
```

Example 2

On a Windows platform, create and save a document to the My Documents folder.

```
var myDoc = app.newDoc();
var myPath = app.getPath("user", "documents") + "/myDoc.pdf"
myDoc.saveAs(myPath);
myDoc.closeDoc();
```

goBack

3.01			

Goes to the previous view on the view stack, which is equivalent to clicking the Previous View button on the Acrobat toolbar.

Example

Create a go-back button. This code could be part of a batch sequence, for example, to place navigation buttons on the selected PDF documents.

```
var aRect = this.getPageBox();
var width = aRect[2] - aRect[0];
// The rectangle is 12 points high and 18 points wide, centered at bottom
rect = [width/2-8, 10, width/2+8, 22];
f = this.addField("goBack", "button", 0, rect);
f.textFont="Wingdings";
f.textSize=0;
f.buttonSetCaption("\u00E7");              // Left pointing arrow
f.setAction("MouseUp", "app.goBack()");    // Add an action
```

goForward

3.01			

Goes to the next view on the view stack, which is equivalent to clicking the go Next View button on the Acrobat toolbar.

Example

See the example following `app.goBack`.

hideMenuItem

4.0		S	

Removes a specified menu item.

See also `addMenuItem`, `addSubMenu`, `execMenuItem`, and `listMenuItems`.

Note: This method can only be executed during a console or application initialization event. See the `event` object for a discussion of JavaScript events.

Parameters

`cName`	The menu item name to remove. Menu item names can be discovered with `listMenuItems`.

hideToolbarButton

4.0		S	

Removes a specified toolbar button.

Note: This method can only be executed during console or application initialization event. See the `event` object for a discussion of JavaScript events.

Parameters

`cName`	The name of the toolbar button to remove. Toolbar item names can be discovered with `listToolbarButtons`.

Example

A file named, `myConfig.js`, containing the following script is placed in one of the folder-level JavaScript folders.

```
app.hideToolbarButton("Hand");
```

When the viewer is started, the “Hand” icon does not appear.

launchURL

7.0		S	

Launches a URL in a browser window.

Note: This method does not support URLs that begin with either scheme name `javascript` or `file`.

Parameters

`cURL`	A string that specifies the URL to launch.
`bNewFrame`	(optional) If `true`, this method launches the URL in a new window of the browser application. The default is `false`.

Returns

The value `undefined` is returned on success. An exception is thrown on failure.

Example 1

```
app.launchURL("http://www.example.com/", true);
```

Example 2

Add an online help item to the menu system. This code should be placed in a folder-level JavaScript file, or executed from the JavaScript Debugger console.

```
app.addMenuItem({
   cName: "myHelp", cUser: "Online myHelp",
   cParent: "Help",
   cExec: "app.launchURL('www.example.com/myhelp.html');",
   nPos: 0
});
```

Related methods are `openDoc` and the Doc object `getURL` method.

listMenuItems

5.0			

Beginning with Acrobat 6.0, returns an array of `TreeItem` objects, which describes a menu hierarchy.

Prior to Acrobat 6.0, this method returned a list of menu item names to the console.

See also `addMenuItem`, `addSubMenu`, `execMenuItem`, and `hideMenuItem`.

Returns

Array of `TreeItem` objects.

TreeItem Object

A generic JavaScript object that represents a menu or toolbar item hierarchy. An array of these objects is returned by `app.listMenuItems` and `app.listToolbarButtons` (starting in Acrobat 6.0). It contains the following properties.

`cName`	The name of a menu item or toolbar button.
`oChildren`	(optional) An array of `treeItem` objects containing the submenus or flyout buttons.

Example 1

List all menu item names to the console.

```
var menuItems = app.listMenuItems()
for( var i in menuItems)
   console.println(menuItems[i] + "\n")
```

Example 2

List all menu items to the console using a fancy format.

```
function FancyMenuList(m, nLevel)
{
   var s = "";
   for (var i = 0; i < nLevel; i++) s += " ";
   console.println(s + "+-" + m.cName);
   if ( m.oChildren != null )
      for ( var i = 0; i < m.oChildren.length; i++ )
         FancyMenuList(m.oChildren[i], nLevel + 1);
}
var m = app.listMenuItems();
for ( var i=0; i < m.length; i++ ) FancyMenuList(m[i], 0);
```

listToolbarButtons

5.0			

Beginning with Acrobat 6.0, returns an array of `treeItem` objects that describes a toolbar hierarchy (with flyout toolbars).

Prior to Acrobat 6.0, this method displayed a list of toolbar button names in the console.

(Acrobat 8.0) In the Documents category of the Preferences dialog box, when "Show each document in its own window (requires restart)" item is checked, the document window must be empty in order for `listToolbarButtons` to return the array of `TreeItem` objects.

Returns

Array of `TreeItem` objects

Example

List all toolbar names in the console.

```
var toolbarItems = app.listToolbarButtons()
for( var i in toolbarItems)
   console.println(toolbarItems[i] + "\n")
```

See also the `hideToolbarButton` method.

mailGetAddrs

6.0		S	X

Note: This method is a Windows-only feature.

Displays an address book dialog box to let the user choose e-mail recipients. The dialog box is optionally prepopulated with semicolon-separated lists of addressees in the `cTo`, `cCc`, and `cBcc` strings. The `bCc` and `bBcc` Boolean values control whether the user should be allowed to choose CC and BCC recipients.

See also `mailMsg`, the Doc object methods `mailDoc` and `mailForm`, the `FDF` object `mail` method and the `Report` object `mail` method.

Note: (Acrobat 7.0) This method can only be executed during a batch or console event. See also "Privileged versus non-privileged context" on page 32. See the `event` object for a discussion of JavaScript events.

Parameters

`cTo`	(optional) A semicolon-separated list of "To" addressees to use.
`cCc`	(optional) A semicolon-separated list of CC addressees to use.
`cBcc`	(optional) A semicolon-separated list of BCC addressees to use.
`cCaption`	(optional) A string to appear on the caption bar of the address dialog box.
`bCc`	(optional) A Boolean value to indicate whether the user can choose CC recipients.
`bBcc`	(optional) A Boolean value to indicate whether the user can choose BCC recipients. This Boolean should only be used when `bCc` is `true`; otherwise, the method fails (and returns `undefined`).

Returns

On failure (the user cancelled), returns undefined. On success, returns an array of three strings for To, CC, and BCC.

Example

Give the user two chances to provide mail addresses.

```
var attempts = 2;
while (attempts > 0)
{
   var recipients = app.mailGetAddrs
   ({
      cCaption: "Select Recipients, Please",
      bBcc: false
   })
   if (typeof recipients == "undefined" ) {
      if (--attempts == 1)
         app.alert("You did not choose any recipients, try again");
   } else break;
}
if (attempts == 0)
   app.alert("Cancelling the mail message");
else {
   // JavaScript statements to send mail
}
```

mailMsg

4.0			✖

Sends out an e-mail message with or without user interaction.

See also the Doc object `mailDoc` and `mailForm` methods, the `FDF` object `mail` method and the `Report` object `mail` method.

Note: On Windows: The client machine must have its default mail program configured to be MAPI enabled to use this method.

Parameters

`bUI`	Indicates whether user interaction is required. If `true`, the remaining parameters are used to seed the compose-new-message window that is displayed to the user. If `false`, the `cTo` parameter is required and others are optional. **Note:** (Acrobat 7.0) When this method is executed in a non-privileged context, the `bUI` parameter is not honored and defaults to `true`. See "Privileged versus non-privileged context" on page 32.
`cTo`	A semicolon-separated list of addressees.
`cCc`	(optional) A semicolon-separated list of CC addressees.
`cBcc`	(optional) A semicolon-separated list of BCC addressees.
`cSubject`	(optional) Subject line text. The length limit is 64 KB.
`cMsg`	(optional) Mail message text. The length limit is 64 KB.

Example

Open the compose new message window.

```
app.mailMsg(true);
```

Send the message to `fun1@example.com` and `fun2@example.com`.

```
app.mailMsg(false, "fun1@example.com; fun2@example.com", "", "",
"This is the subject", "This is the body of the mail.");
```

It is possible to compose a message containing form data.

```
var cMyMsg = "Below are the current budget figures:\n\n";
cMyMsg += "Date Compiled: " + this.getField("date").value + "\n";
cMyMsg += "Current Estimate: " + this.getField("budget").value + "\n";
app.mailMsg({
   bUI: true,
   cTo: "myBoss@example.com",
   cSubject: "The latest budget figures",
   cMsg: cMyMsg
} );
```

newDoc

5.0		S	X

Creates a new document and returns its Doc object. The optional parameters specify the media box dimensions of the document in points.

Note: This method can only be executed during a batch or console event. See "Privileged versus non-privileged context" on page 32. See the `event` object for a discussion of JavaScript events.

Parameters

`nWidth`	(optional) The width (in points) for the new document. The default value is 612.
`nHeight`	(optional) The height (in points) for the new document. The default value is 792.

Returns

The object of the newly created document.

Example

Add a New item to the Acrobat File menu. Within New, there are three menu items: Letter, A4, and Custom. This script should go in a folder-level JavaScripts `.js` file.

```
app.addSubMenu({ cName: "New", cParent: "File", nPos: 0 })
app.addMenuItem({ cName: "Letter", cParent: "New", cExec:
   "app.newDoc();"});
app.addMenuItem({ cName: "A4", cParent: "New", cExec:
   "app.newDoc(420,595)"});
app.addMenuItem({ cName: "Custom...", cParent: "New", cExec:
```

```
   "var nWidth = app.response({ cQuestion:'Enter Width in Points',\
     cTitle:     'Custom Page Size'});"
   +"if (nWidth == null) nWidth = 612;"
   +"var nHeight = app.response({ cQuestion:'Enter Height in Points',\
     cTitle: 'Custom Page Size'});"
   +"if (nHeight == null) nHeight = 792;"
   +"app.newDoc({ nWidth: nWidth, nHeight: nHeight })"});
```

The script above works for versions of Acrobat prior to 7.0. For Acrobat 7.0, it works correctly if the user JavaScript preference Enable Menu Items JavaScript Execution Privileges is enabled.

If this item is not checked, the `app.newDoc` method must be executed through a `trustedFunction` because execution of JavaScript through a menu event is no longer privileged beginning with Acrobat 7.0. See "Privileged versus non-privileged context" on page 32.

The same example can be worked as follows:

```
trustedNewDoc = app.trustedFunction( function (nWidth, nHeight)
{
   app.beginPriv();
      switch( arguments.length ) {
         case 2:
            app.newDoc( nWidth, nHeight );
            break;
         case 1:
            app.newDoc( nWidth );
            break;
         default:
            app.newDoc();
      }
   app.endPriv();
})
app.addSubMenu({ cName: "New", cParent: "File", nPos: 0 })
app.addMenuItem({ cName: "Letter", cParent: "New", cExec:
   "trustedNewDoc();"});
app.addMenuItem({ cName: "A4", cParent: "New", cExec:
   "trustedNewDoc(420,595)"});
app.addMenuItem({ cName: "Custom...", cParent: "New", cExec:
   "var nWidth = app.response({ cQuestion:'Enter Width in Points',\
     cTitle: 'Custom Page Size'});"
   +"if (nWidth == null) nWidth = 612;"
   +"var nHeight = app.response({ cQuestion:'Enter Height in Points',\
     cTitle: 'Custom Page Size'});"
   +"if (nHeight == null) nHeight = 792;"
   +"trustedNewDoc(nWidth, nHeight) "});
```

The code is incomplete. In the case of the Custom menu item, additional lines can be inserted to prevent the user from entering the empty string, or a value too small or too large. See the *PDF Reference* version 1.7 for the current limitations.

Example

Create a blank document and acquire the Doc object, then insert a watermark.

```
var myNewDoc = app.newDoc();
myNewDoc.addWatermarkFromText("Confidential",0,font.Helv,24,color.red);
```

This example uses the Doc object `addWatermarkFromText` method.

newFDF

6.0		S	X

Creates a new `FDF` object that contains no data.

Note: This method is available only during batch, console and application initialization. Not available in Adobe Reader. See "Privileged versus non-privileged context" on page 32.

Returns

A new `FDF` object.

Example

Create an FDF with an embedded PDF file.

```
var fdf = app.newFDF();
fdf.addEmbeddedFile( "/c/myPDFs/myFile.pdf", 1);
fdf.save( "/c/myFDFs/myFile.fdf" );
```

This example continues following the description of `app.openFDF`.

openDoc

5.0			

Opens a specified PDF document and returns its Doc object. This object can be used by the script to call methods, or to get or set properties in the newly opened document.

Note: When a batch sequence is running, a modal dialog box is open, which prevents user interference while processing. Consequently, this method cannot be executed through a batch sequence.

An exception is thrown and an invalid Doc object is returned when an HTML document is opened using this method. To catch the exception, enclose `app.openDoc` in a `try/catch` construct. See Example 2 below.

Parameters

`cPath`	A device-independent path to the document to be opened. If `oDoc` is specified, the path can be relative to it. The target document must be accessible in the default file system. **Note:** When `cFS` is set to "CHTTP", the `cPath` string should be escaped, perhaps using the core JavaScript global function `encodeURI`. See Example 5 (Acrobat 7.0) below.
`oDoc`	(optional) A Doc object to use as a base to resolve a relative `cPath`. Must be accessible in the default file system.
`cFS`	(optional, Acrobat 7.0) A string that specifies the source file system name. Two values are supported: "" (the empty string, which is the default), representing the default file system, and "CHTTP". This parameter is relevant only if the web server supports WebDAV.
`bHidden`	(optional, Acrobat 7.0) A Boolean value that if `true`, opens the PDF file with its window hidden. The default is `false`.
`bUseConv`	(optional, Acrobat 7.0) A Boolean value that is used when `cPath` references a non-PDF file. If `true`, the method tries to convert the non-PDF file to a PDF document. The default is `false`. **Note:** (Acrobat 7.0) `bUseConv` can only be set to `true` during a console or batch event. See also "Privileged versus non-privileged context" on page 32.
`cDest`	(optional, Acrobat 8.0) The name of the destination within a document. This parameter forces opening at named destination within the PDF document. For details on named destinations and how to create them, see the *PDF Reference* version 1.7.

Returns

A Doc object or `null`:

- In Acrobat 5.0, this method returns a Doc object.
- In Acrobat 5.0.5, the method returns the Doc object unless the `disclosed` property of the target document is not `true`, in which case it returns `null`.
- Beginning with the Acrobat 5.0.5 Accessibility and Forms Patch and continuing with Acrobat 6.0 and later, `openDoc` behaves as follows:
  - During a batch, console or menu event, `openDoc` ignores the `disclosed` property and returns the Doc object of the file specified by `cPath`.
  - During any other event, `openDoc` returns the Doc, if `disclosed` is `true`, and `null`, otherwise.

Example 1

This example opens another document, inserts a prompting message into a text field, sets the focus in the field, and then closes the current document.

```
var otherDoc = app.openDoc("/c/temp/myDoc.pdf");
otherDoc.getField("name").value="Enter your name here: "
otherDoc.getField("name").setFocus();
```

```
this.closeDoc();
```

Same example as above, but a relative path is used.

```
var otherDoc = app.openDoc("myDoc.pdf", this);
otherDoc.getField("name").value="Enter your name here: "
otherDoc.getField("name").setFocus();
this.closeDoc();
```

This example uses the Doc `closeDoc` method and the Field object `setFocus` method.

Example 2

Open an HTML document on the user's hard drive and convert it to PDF.

```
try {
   app.openDoc("/c/myWeb/myHomePage.html");
} catch (e) {};
```

Example 3 (Acrobat 7.0)

Open a hidden PDF document, extract information from it, and close it.

```
oDoc = app.openDoc({
   cPath:"/C/myDocs/myInfo.pdf",
   bHidden: true
});
var v = oDoc.getField("myTextField").value;
this.getField("yourTextField").value = v;
oDoc.closeDoc();
```

Example 4 (Acrobat 7.0)

Open a non-PDF file by converting it to a PDF document. The following script can be executed successfully from the console.

```
app.openDoc({
   cPath: "/c/temp/myPic.jpg",
   bUseConv: true
})
```

Example 5 (Acrobat 7.0)

Open a file from a WebDAV server. The `app.openDoc` method requires the path to the file to be escaped.

```
var myURL = encodeURI("http://www.example.com/My Folder/ComDoc.pdf");
app.openDoc({cPath: myURL, cFS: "CHTTP" });
```

See also `app.browseForDoc`.

Example 6 (Acrobat 8.0)

Open a document and jump to a named destination.

```
app.openDoc({ cPath: "/c/temp/myDoc.pdf", cDest: "myDest" });
```

In versions previous to 8.0, this jump is not possible unless the document is `disclosed`. See the example following `gotoNamedDest`.

openFDF

6.0		S	X

Creates a new `FDF` object by opening the specified file. The `FDF` object has methods and properties that can be used on the data that this file contains.

Note: This method is available only during batch, console and application initialization events. See also "Privileged versus non-privileged context" on page 32.

Parameters

`cDIPath`	The device-independent path to the file to be opened.

Returns

The `FDF` object for the FDF file that is opened.

Example

Create an FDF file with an embedded PDF file.

```
var fdf = app.newFDF();
fdf.addEmbeddedFile( "/c/myPDFs/myFile.pdf", 1);
fdf.save( "/c/myFDFs/myFile.fdf" ); // save and close this FDF

// Now open the FDF file and embed another PDF doc.
var fdf = app.openFDF( "/c/myFDFs/myFile.fdf" );
fdf.addEmbeddedFile( "/c/myPDFs/myOtherFile.pdf", 1);
fdf.save( "/c/myFDFs/myFile.fdf" ); // save and close this FDF
```

See the `FDF` object `signatureSign` method for another example of usage.

popUpMenu

5.0			

Note: `popUpMenuEx` is preferred over this method.

Creates a pop-up menu at the current mouse position, containing the specified items.

Parameters

`cItem`	(optional) If the argument is a string, it is listed in the menu as a menu item. The menu item name "-" is reserved to draw a separator line in the menu.
`Array`	(optional) If the argument is an array, it appears as a submenu where the first element in the array is the parent menu item. This array can contain further submenus.

Returns

The name of the menu item that was selected, or `null` if no item was selected.

Example

Create a pop-up menu consisting of chapter of a document.

```
var cChoice = app.popUpMenu("Introduction", "-", "Chapter 1",
   [ "Chapter 2", "Chapter 2 Start", "Chapter 2 Middle",
   ["Chapter 2 End", "The End"]]);
app.alert("You chose the \"" + cChoice + "\" menu item");
```

popUpMenuEx

6.0			

Creates a pop-up menu at the current mouse position. Each of the parameters is a `MenuItem` object that describes a menu item to be included in the pop-up menu.

This method is preferred over the use of `popUpMenu`.

Parameters

One or more `MenuItem` objects (see below).

Returns

The `cReturn` value of the menu item that was selected, or its `cName` if `cReturn` was not specified for that item. The method returns `null` if no selection was made.

MenuItem Object

This generic JavaScript object represents a menu item. It has the following properties.

Property	Description
`cName`	The menu item name, which is the string to appear on the menu item. The value of "-" is reserved to draw a separator line in the menu.
`bMarked`	(optional) A Boolean value specifying whether the item is to be marked with a check. The default is `false` (not marked).

Property	Description
bEnabled	(optional) A Boolean value specifying whether the item is to appear enabled or grayed out. The default is true (enabled).
cReturn	(optional) A string to be returned when the menu item is selected. The default is the value of cName.
oSubMenu	(optional) A MenuItem object representing a submenu item or an array of submenu items, each represented by a MenuItem object.

Example 1

Show all the features of the popUpMenuEx method.

```
var cChoice = app.popUpMenuEx
   (
      {cName: "Item 1", bMarked:true, bEnabled:false},
      {cName: "-"},
      {cName: "Item 2", oSubMenu:
         [ {cName: "Item 2, Submenu 1"},
            {
               cName: "Item 2, Submenu 2",
               oSubMenu: {cName:"Item 2, Submenu 2, Subsubmenu 1", cReturn: "0"}
            }
         ]
      },
      {cName: "Item 3"},
      {cName: "Item 4", bMarked:true, cReturn: "1"}
   )
   app.alert("You chose the \"" + cChoice + "\" menu item");
```

Example 2

Because the popupMenuEx method takes a list of MenuItem objects, its parameters cannot be passed to it as a JavaScript variable. As a workaround, you can create an array of menu items and use the Function object method apply from core JavaScript. This method allows arguments to be passed as an array.

```
// Declare pop-up menu properties as an array.
var aParams = [
   {cName: "Adobe Web Page", cReturn: "www.adobe.com"},
   {cName: "-"},
   {cName: "The Adobe Acrobat family",
    cReturn: "http://www.adobe.com/products/Acrobat/main.html"},
   {cName: "Adobe Reader",
    cReturn: "http://www.adobe.com/products/Acrobat/readstep2.html"}
];
// Apply the function app.popUpMenuEx to the app object, with an array
// of parameters aParams
var cChoice = app.popUpMenuEx.apply( app, aParams );
if ( cChoice != null ) app.launchURL(cChoice);
```

removeToolButton

6.0			

Removes a previously added button from the toolbar.

Note: (Acrobat 7.0) To remove a toolbutton added by the `addToolButton` method, `removeToolButton` must be executed within the same context as when `addToolButton` was executed.

If no document was open in Acrobat when the button was added, there must be no document open in Acrobat when the button is removed. See Example 2 below.

Similarly, if a certain document was the active document when a toolbutton was added, that same document must be active for the button to be removed using `removeToolButton`.

In the case of a document that is active when the toolbutton is added, the button is automatically removed when this document is closed. See also the notes following the description of `addToolButton`.

Parameters

`cName`	The language-independent identifier provided when `addToolButton` was called.

Example 1

See the example following `addToolButton`.

Example 2

This example shows the removal of a toolbutton with the same context as `addToolButton`. Initially, there is no document open in the Acrobat. Execute the following code from the console:

```
app.addToolButton({cName: "button1", cExec:"app.alert('pressed');",
  cTooltext:"Button1"});
```

Open a PDF document in Acrobat and execute the next line from the console:

```
app.removeToolButton({cName:"button1"});
```

An exception is thrown and the removal of the button fails.

If you close the PDF document and execute the `removeToolButton` script again, the button is removed.

response

3.01			

Displays a dialog box containing a question and an entry field for the user to reply to the question.

Parameters

`cQuestion`	The question to be posed to the user.
`cTitle`	(optional) The title of the dialog box.
`cDefault`	(optional) A default value for the answer to the question. If not specified, no default value is presented.
`bPassword`	(optional) If `true`, indicates that the user's response should show as asterisks (*) or bullets (•) to mask the response, which might be sensitive information. The default is `false`.
`cLabel`	(optional, Acrobat 6.0) A short string to appear in front of and on the same line as the edit text field.

Returns

A string containing the user's response. If the user clicks the Cancel button, the response is the `null` object.

Example

Asks for a response from the user and report back the response.

```
var cResponse = app.response({
   cQuestion: "How are you today?",
      cTitle: "Your Health Status",
      cDefault: "Fine",
      cLabel: "Response:"
});
if (cResponse == null)
   app.alert("Thanks for trying anyway.");
else
   app.alert("You responded, \""+cResponse+"\", to the health "
      + "question.",3);
```

setInterval

5.0			

Specifies a JavaScript script and a time period. The script is executed every time the period elapses.

The return value of this method must be held in a JavaScript variable. Otherwise, the interval object is subject to garbage-collection, which would cause the clock to stop.

To terminate the periodic execution, pass the returned interval object to `clearInterval`.

Note: Beginning with Acrobat 7.05, an interval is automatically terminated when the document whose script called `setInterval` is closed (assuming it was not previously terminated).

Opening and closing the document JavaScripts dialog box causes the JavaScript interpreter to re-read the document JavaScripts and consequently to re-initialize any document-level variables. Resetting document-level variables in this way after JavaScript expressions have been registered to

be evaluated by `setInterval` or `setTimeOut` may cause JavaScript errors if those scripts use document-level variables.

See also `clearInterval`, `setTimeOut` and `clearTimeOut`.

Parameters

`cExpr`	The JavaScript script to be executed.
`nMilliseconds`	The time period in milliseconds.

Returns

An `interval` object

Example

Create a simple color animation on a field called "Color" that changes every second.

```
function DoIt() {
   var f = this.getField("Color");
   var nColor = (timeout.count++ % 10 / 10);
   // Various shades of red.
   var aColor = new Array("RGB", nColor, 0, 0);
   f.fillColor = aColor;
}
// save return value as a variable
timeout = app.setInterval("DoIt()", 1000);
// Add a property to our timeout object so that DoIt() can keep
// a count going.
timeout.count = 0;
```

See `setTimeOut` for an additional example.

setTimeOut

5.0			

Specifies a JavaScript script and a time period. The script is executed one time only, after the period elapses.

The return value of this method must be held in a JavaScript variable. Otherwise, the timeout object is subject to garbage-collection, which would cause the clock to stop.

To cancel the timeout event, pass the returned timeout object to `clearTimeOut`.

Note: Beginning with Acrobat 7.05, an interval is automatically terminated when the document whose script called `setInterval` is closed (assuming it was not previously terminated).

Opening and closing the document JavaScripts dialog box causes the JavaScript interpreter to re-read the document JavaScripts and consequently to re-initialize any document-level variables. Resetting document-level variables in this way after JavaScript expressions have been registered to

be evaluated by `setInterval` or `setTimeOut` may cause JavaScript errors if those scripts use document-level variables.

See also `clearTimeOut`, `setInterval`, and `clearInterval`.

Parameters

`cExpr`	The JavaScript script to be executed.
`nMilliseconds`	The time period in milliseconds.

Returns

A `timeout` object

Example

Create a simple running marquee. Assume there is a text field named "marquee". The default value of this field is "Adobe Acrobat version 8.0 will soon be here!".

```
// Document-level JavaScript function
function runMarquee() {
   var f = this.getField("marquee");
   var cStr = f.value;
   // get field value
   var aStr = cStr.split("");          // Convert to an array
   aStr.push(aStr.shift());           // Move first char to last
   cStr = aStr.join("");              // Back to string again
   f.value = cStr;                    // Put new value in field
}

// Insert a mouse-up action into a "Go" button
run = app.setInterval("runMarquee()", 100);
// stop after a minute
stoprun=app.setTimeOut("app.clearInterval(run)",6000);

// Insert a mouse-up action into a "Stop" button
try {
   app.clearInterval(run);
   app.clearTimeOut(stoprun);
} catch (e){}
```

The Stop button code is protected with a try/catch construct. If the user clicks the Stop button without having first clicked Go, `run` and `stoprun` will be undefined and the Stop code will throw an exception. When the exception is thrown, the `catch` code is executed. In this example, the code does nothing if the user clicks Stop first.

trustedFunction

7.0		S	

Marks a function as trusted. Trusted functions can explicitly increase the current *privilege level* for their stack frame. Typically, the stack frame (which corresponds to the body of the function) contains security-restricted methods that require a privileged context in which to run. By increasing the privilege level, these restricted methods can be executed in non-privileged contexts. See "Privileged versus non-privileged context" on page 32.

Within the body of the function definition, calls to the `app.beginPriv` and `app.endPriv` methods must enclose any code that normally executes in a privileged context, as the examples below show.

Note: This method is available only during batch, console and application initialization events

Parameters

`oFunc`	A function object that specifies the function to mark as trusted.

Returns

On success, returns the same function object that was passed in. After successful execution, the function object will be trusted. On error, throws `NotAllowedError`.

Syntax

This method can be called in two ways.

```
myTrustedFunction = app.trustedFunction(
   function()
   {
      <function body>
   }
);
```

or

```
function myOtherTrustedFunction()
{
   <function body>
};
app.trustedFunction(myOtherTrustedFunction);
```

The following examples, along with the examples following the `app.trustPropagatorFunction` method, contain many comments that clarify the notion of trusted function and highlight some of the nuances of the topic.

Example 1

`app.newDoc` is a security-restricted method that needs a privileged context in which to run. For example, it cannot normally be executed from a mouse-up event. This example shows how this method can be executed from a mouse-up event by creating a trusted function.

Place the following script in a `.js` file in the User (or App) JavaScript folder.

```
trustedNewDoc = app.trustedFunction( function (nWidth, nHeight)
{
   // Additional code may appear above
   app.beginPriv(); // Explicitly raise privilege
   app.newDoc( nWidth, nHeight );
   app.endPriv();
   // Additional code may appear below.
})
```

After Acrobat is restarted, the `trustedNewDoc` function can be executed from anywhere. The following script for a mouse-up action of a button creates a new document that is 200 points by 200 points.

```
trustedNewDoc( 200, 200 );
```

Because of security restrictions, `app.newDoc(200,200)` cannot normally be executed from a mouse-up event. The trusted function permits the creation of a new document.

Note: This example is simplified. The trusted function could be modified so that it also has the two optional arguments of the `app.newDoc` method.

The `trustedNewDoc` function can also be executed as a menu item.

```
app.addMenuItem( {
   cName: "myTrustedNewDoc",
   cUser: "New Doc", cParent: "Tools",
   cExec: "trustedNewDoc(200,200)", nPos: 0
} );
```

Again, `trustedNewDoc` could be enhanced by having the user input the dimensions for the new document, either through a series of `app.response` dialog boxes, or a full dialog box, created by `app.execDialog`.

Note: If `app.newDoc` is not enclosed in the `app.beginPriv/app.endPriv` pair, executing `trustedNewDoc` from a non-privileged context will fail and an exception will be thrown. You must explicitly raise the privilege level in the way shown.

Example 2

The `app.activeDocs` property behaves differently depending on the setting:

- During a console or batch event, it returns an array of all active documents.
- In a non-privileged context, it returns an array of only those active documents that have their `disclosed` property set to `true`.

To overcome this limitation in non-privileged context, you can define a trusted function that raises the privilege level and calls `activeDocs`. This function would be defined in a `.js` file in the User (or App) JavaScript folder.

```
trustedActiveDocs = app.trustedFunction (
   function()
   {
      app.beginPriv(); // Explicitly raise the privilege
      var d = app.activeDocs;
      app.endPriv();
      return d;
```

```
    }
)
```

The following code can be executed from a mouse-up action of a form button.

```
var d = trustedActiveDocs();
console.println("There are d = " + d.length
   + " files open in the viewer.")
for ( var i=0; i< d.length; i++)
   console.println((i+1) + ". " + d[i].documentFileName )
```

The console reports the number and file name of all documents—disclosed or not—open in the viewer.

Example 3

A trusted function is capable of explicitly increasing the current privilege level only for its own stack frame. This example shows some related issues.

The following code attempts to make a trusted function more modular:

```
function mySaveAs(doc, path)
{
   doc.saveAs(doc, path);
}
myFunc = app.trustedFunction( function (doc, path)
{
   // privileged and/or non-privileged code here
   app.beginPriv();
   mySaveAs(doc, path);
   app.endPriv();
   // privileged and/or non-privileged code here
}
```

A problem occurs because when the privileged code `doc.saveAs(doc, path)` is executed, it is not within the stack frame (function body) of the calling trusted function `myFunc` but rather within the stack frame of `mySaveAs`, which is not a trusted function. Therefore, when `myFunc` is executed in a non-privileged context, it throws an exception.

A possible solution is to make `mySaveAs` into a trusted function so that `myFunc` succeeds. However, this exposes the privileged `doc.saveAs` function to non-privileged execution by anyone that knows this function is on your system.

You cannot simply enclose `doc.saveAs(doc,path)` in a `beginPriv/endPriv` pair. When `myFunc` is run from a non-privileged context, an exception will be thrown by the `app.beginPriv` within the body of the `mySaveAs` function. This is because `mySaveAs` is not trusted and therefore is not authorized to request an increased privilege level.

To summarize the observations above, there is a need for a kind of function that has the following characteristics:

- It can be called by a trusted function.
- It is not trusted itself and therefore cannot be directly called from a non-privileged context.

A *trust propagator* function satisfies these criteria (see `trustPropagatorFunction` below).

trustPropagatorFunction

7.0		S	

Marks a function as a *trust propagator*. Such a function is not itself trusted but can inherit trust if called from a trusted function.

A trust propagator function propagates trust, not privilege. Therefore, as with the method `app.trustedFunction`, an `app.beginPriv/app.endPriv` pair must enclose any code within the function body that normally executes in a privileged context.

Trust propagator functions can play the role of utility functions. They can be called by a trusted function and by another trust propagator function, but they cannot successfully be called by a function that is not trusted in a non-privileged context.

Note: Functions defined in `.js` files in the App JavaScript folder are implicitly trust propagator functions. Functions defined in `.js` files in the User JavaScript folder are not.

This method is available only during batch, console, and application initialization.

Syntax

This method can be called in two ways.

```
myPropagatorFunction = app.trustPropagatorFunction(
   function()
   {
      <function body>
   }
);
```

or

```
function myOtherPropagatorFunction()
{
   <function body>
};
app.trustPropagatorFunction(myOtherPropagatorFunction);
```

Parameters

`oFunc`	A function object that specifies the function to mark as a trust propagator.

Returns

On success, returns the same function object that was passed in. After successful execution, the function object will be a trust propagator. On error, throws `NotAllowedError`.

Example 1

For background, see "Example 3" on page 145.

This example defines a trust propagator function, `mySaveAs`, to save a file to a folder, and a trusted function, `myTrustedSpecialTaskFunc`, to perform various tasks involving privileged and non-privileged code. The `mySaveAs` function cannot be called directly in a non-privileged context.

```
mySaveAs = app.trustPropagatorFunction(function(doc,path)
{
   app.beginPriv();
      doc.saveAs(path);
   app.endPriv();
})
myTrustedSpecialTaskFunc = app.trustedFunction(function(doc,path)
{
   // Privileged and/or non-privileged code above
   app.beginPriv();
      mySaveAs(doc,path);
   app.endPriv();
   // Privileged and/or non-privileged code below
});
```

Executing the code from a mouse-up button, for example, saves the current document to the specified path.

```
myTrustedSpecialTaskFunc(this, "/c/temp/mySavedDoc.pdf");
```

Example 2

This example develops a simple dialog box using the `app.execDialog` method and executes privileged code.

The dialog box asks for your name and asks you to browse for a document from your local hard drive (or a network drive). When you click the OK button, the selected file is loaded into the viewer and your name is placed in the author field of the document properties. (The insertion of the name only occurs if the author field is empty.) The dialog box also displays the value of `identity.email`, which is privileged information.

Any privileged code is enclosed by a `beginPriv/endPriv` pair.

Note the use of the `ANTrustPropagateAll` function, which is useful for creating dialog boxes that use privileged code. It takes a single object as its argument, turns every function in the object into a trust propagator function, then returns that object.

```
myDialog = app.trustedFunction(function()
{
   app.beginPriv();
   var dialog = ANTrustPropagateAll({
      initialize:function(dialog) {
         this.data = {}; // An object to hold dialog data
         app.beginPriv();
         dialog.load({ "emai": "Email: " + identity.email });
         app.endPriv();
      },
      commit:function (dialog) { // Called when OK pressed
         var results = dialog.store();
         console.println("Your name is " + results["name"] );
         this.data.name = results["name"];
      },
```

```
brws: function (dialog) {
   app.beginPriv();
   var oRetn = app.browseForDoc();
   if ( typeof oRetn != "undefined")
     this.data.oRetn = oRetn;
   app.endPriv();
},
doDialog:function() {
   app.beginPriv();
   var retn = app.execDialog(this);
   app.endPriv();
   return retn;
},
description: {
   name: "Open File & Populate Info Field",
   align_children: "align_left",
   elements:
   [
     {
       type: "view",
       align_children: "align_left",
       elements:
       [
         {
           type: "view",
           align_children: "align_row",
           elements:
           [
             {
               type: "static_text",
               name: "Name: "
             },
             {
               item_id: "name",
               type: "edit_text",
               alignment: "align_fill",
               width: 300,
               height: 20
             },
           ]
         },
         {
           type: "static_text",
           item_id: "emai",
           name: "Email: ",
           char_width: 25
         },
         {
           type: "gap",
           height: 10
         },
         {
           type: "view",
           align_children: "align_row",
           elements:
```

```
                    [
                      {
                        type: "button",
                        name: "Browse",
                        item_id: "brws"
                      },
                      {
                        type: "ok_cancel",
                        ok_name: "Ok",
                        cancel_name: "Cancel"
                      }
                    ]
                  }
                ]
              }
            ]
          }
        });
        app.endPriv();
        try { // Protect against user pressing the Esc key
          // After everything is set up, run the dialog box using the doDialog
          // function, defined in the object dialog.
          var retn = dialog.doDialog();
          app.beginPriv();
          // If the user clicked the Ok button and there is oRetn data we load
          // the requested file using app.openDoc(), a restricted method.
          if ( (retn == "ok") && dialog.data.oRetn ) {
            var oDoc = app.openDoc({
              cPath: dialog.data.oRetn.cPath,
              cFS: dialog.data.oRetn.cFS
            });
            if ( !oDoc.info.Author  )
              oDoc.info.Author = dialog.data.name;
          }
          app.endPriv();
        } catch(e) {}
    })
```

This dialog box can be activated from a button or, more appropriately, from a menu item or a toolbar button. For example, place the following code in a User JavaScript file to add a menu item to the Tools menu.

```
app.addMenuItem( { cName: "myDialog", cUser: "My Cool Dialog",
  cParent: "Tools", cExec: "myDialog()", nPos: 0 } );
```

app.media

This object defines properties and functions useful in multimedia JavaScript code.

Several `app.media` properties are enumeration objects that list the values allowed in various properties. Future versions of Acrobat may add more such values, and JavaScript code should be prepared to encounter values other than the ones listed here. Similarly, JavaScript code may be run on an older version of Acrobat than it was designed for, in which case it must fall back to using the values available in that version.

app.media properties

align

6.0			

Enumerates the values that may be found in the `MediaSettings.floating.align` property. The alignment is relative to the window specified by the `MediaSettings.floating.over` property. (See the values for `app.media.over`.)

Valid values are listed in the table below.

Value	Position of floating window
`app.media.align.topLeft`	At the top left corner
`app.media.align.topCenter`	At the top center
`app.media.align.topRight`	At the top right corner
`app.media.align.centerLeft`	At the center left
`app.media.align.center`	At the center
`app.media.align.centerRight`	At the center right
`app.media.align.bottomLeft`	At the bottom left corner
`app.media.align.bottomCenter`	At the bottom center
`app.media.align.bottomRight`	At the bottom right corner

Type

Object (enumeration)

Access

R

canResize

6.0			

Enumerates the values that may be found in the `MediaSettings.floating.canResize` property, which specifies whether a floating window may be resized by the user.

These values are listed in the table below.

Value	Description
`app.media.canResize.no`	May not be resized
`app.media.canResize.keepRatio`	May be resized only if the aspect ratio is preserved
`app.media.canResize.yes`	May be resized without preserving the aspect ratio

Type

Object (enumeration)

Access

R

closeReason

6.0			

Enumerates the values that may be found in the `event.reason` property for a Close event. These values are:

```
app.media.closeReason.general
app.media.closeReason.error
app.media.closeReason.done
app.media.closeReason.stop
app.media.closeReason.play
app.media.closeReason.uiGeneral
app.media.closeReason.uiScreen
app.media.closeReason.uiEdit
app.media.closeReason.docClose
app.media.closeReason.docSave
app.media.closeReason.docChange
```

See the `afterClose` and `onClose` methods of the `EventListener` object.

Type

Object (enumeration)

Access

R

defaultVisible

6.0			

This property is defined as `true`, which is the default value for `MediaSettings.visible`.

Type

Boolean

Access

R

ifOffScreen

6.0			

Enumerates the values allowed in a `MediaSettings.floating.ifOffScreen` property, which specifies what action should be taken if the floating window is positioned totally or partially offscreen.

These values and their descriptions are given in the table below.

Value	Description
`app.media.ifOffScreen.allow`	Take no action
`app.media.ifOffScreen.forceOnScreen`	Move and/or resize the window so that it is on-screen
`app.media.ifOffScreen.cancel`	Cancel playing the media clip

Type

Object (enumeration)

Access

R

layout

6.0			

Enumerates the values allowed in a `MediaSettings.layout` property.

The table below contains the values and their descriptions.

Value	Description
`app.media.layout.meet`	Scale to fit all content, preserve aspect, no clipping, background fill
`app.media.layout.slice`	Scale to fill the window, preserve aspect, and clip X or Y as needed
`app.media.layout.fill`	Scale X and Y separately to fill the window
`app.media.layout.scroll`	Natural size with scrolling
`app.media.layout.hidden`	Natural size with clipping
`app.media.layout.standard`	Use the player's default settings

Type

Object (enumeration)

Access

R

monitorType

6.0			

Enumerates the values allowed in a `MediaSettings.monitorType` property.

The table below contains the values and their descriptions:

Value	Description
`app.media.monitorType.document`	The monitor containing the largest section of the document window
`app.media.monitorType.nonDocument`	The monitor containing the smallest section of the document window
`app.media.monitorType.primary`	Primary monitor
`app.media.monitorType.bestColor`	Monitor with the greatest color depth

Value	Description
`app.media.monitorType.largest`	Monitor with the greatest area (in pixels squared)
`app.media.monitorType.tallest`	Monitor with the greatest height (in pixels)
`app.media.monitorType.widest`	Monitor with the greatest width (in pixels)

Type

Object (enumeration)

Access

R

openCode

6.0			

Enumerates the values that may be found in the code property of the return value from `MediaPlayer.open`. The values are:

```
app.media.openCode.success
app.media.openCode.failGeneral
app.media.openCode.failSecurityWindow
app.media.openCode.failPlayerMixed
app.media.openCode.failPlayerSecurityPrompt
app.media.openCode.failPlayerNotFound
app.media.openCode.failPlayerMimeType
app.media.openCode.failPlayerSecurity
app.media.openCode.failPlayerData
```

Type

Object (enumeration)

Access

R

over

6.0			

Enumerates the values allowed in a `MediaSettings.floating.over` property, the value of which is used to align a floating window. See `app.media.align`.

Value	Description
`app.media.over.pageWindow`	Align the floating window relative to the document (page) window
`app.media.over.appWindow`	Align the floating window relative to the application window
`app.media.over.desktop`	Align the floating window relative to the full virtual desktop
`app.media.over.monitor`	Align the floating window relative to the (selected) monitor display screen

Type

Object (enumeration)

Access

R

pageEventNames

6.0			

Enumerates the values that may be found in the `event.name` property for a page-level action. Event names that represent direct user actions are not included here. This enumeration is used to distinguish page-level actions from user actions. The values are:

```
app.media.pageEventNames.Open
app.media.pageEventNames.Close
app.media.pageEventNames.InView
app.media.pageEventNames.OutView
```

Type

Object (enumeration)

Access

R

Example

`app.media.pageEventNames` can be used to distinguish between a page-level action and a direct user action. The script below is folder-level or document-level JavaScript that can be called from anywhere in a document.

```
function myMMfunction () {
   if ( app.media.pageEventNames[event.name] ) {
      console.println("Page Event: " + event.name);
      ...
   } else {
      console.println("User Generated Event: " + event.name);
      ...
   }
}
```

raiseCode

6.0			

Enumerates values that may be found in the `error.raiseCode` property when an exception is thrown. This property exists only when `error.name` is "RaiseError". Other values may be encountered in addition to these.

```
app.media.raiseCode.fileNotFound
app.media.raiseCode.fileOpenFailed
```

Type

Object (enumeration)

Access

R

raiseSystem

6.0			

Enumerates values that may be found in the `error.raiseSystem` property when an exception is thrown. This property exists only when `error.name` is "RaiseError".

```
app.media.raiseSystem.fileError
```

Other values may be added to the above property.

Type

Object (enumeration)

Access

R

renditionType

6.0			

Enumerates the values that may be found in `Rendition.type`. The values and their descriptions are given below.

Value	Description
`app.media.renditionType.unknown`	A type not known by this version of Acrobat
`app.media.renditionType.media`	A media rendition
`app.media.renditionType.selector`	A rendition selector

Type

Object (enumeration)

Access

R

status

6.0			

Enumerates the values that may be found in the `event.media.code` property for a Status event (see `onStatus`/`afterStatus`). Most of these values have additional information that is found in the `event.text` property. The values are:

Value	Description
`app.media.status.clear`	Empty string—this status event clears any message
`app.media.status.message`	General message
`app.media.status.contacting`	Hostname being contacted
`app.media.status.buffering`	Progress message or nothing
`app.media.status.init`	Name of the engine being initialized
`app.media.status.seeking`	Empty string

Along with the `event.media.status` code, there is also the `event.media.text`, a string that reflects the current status, as described above.

Type

Object (enumeration)

Access

R

trace

6.0			

Set this property to `true` to print trace messages to the JavaScript console during player creation and event dispatching.

Note: `app.media.trace` is for test purposes only. Do not use this property in a PDF file that you publish. It will change in future versions of Acrobat.

Type

Boolean

Access

R/W

version

6.0			

The version number of the multimedia API, currently 7.0.

Type

Number

Access

R

windowType

6.0			

Enumerates the values allowed in a `MediaSettings.windowType` property. These values are given in the table below.

Value	Description
`app.media.windowType.docked`	Docked to a PDF page
`app.media.windowType.floating`	Floating (pop-up) window
`app.media.windowType.fullScreen`	Full screen mode

Type

Object (enumeration)

Access

R

app.media methods

addStockEvents

6.0			

Adds stock EventListeners to a `MediaPlayer` object and sets `player.stockEvents` as a reference to these listeners for later removal.

If the optional `annot` parameter is provided, a reference to the annotation is saved in `MediaPlayer.annot`. Later, when the player is opened with `MediaPlayer.open`, stock `EventListeners` will also be added to this annotation and `annot.player` will be set as a reference to the player.

Parameters

`player`	A required `MediaPlayer` object
`annot`	(optional) A `ScreenAnnot` object

The stock EventListeners provide standard Acrobat behavior such as focus handling.

If `app.media.trace` is `true`, debug trace listeners are also included with the stock EventListeners.

Use the `removeStockEvents` method to remove EventListeners that were added with `addStockEvents`.

The `app.media.createPlayer` and `app.media.openPlayer` methods call `addStockEvents` internally, so in most cases it is not necessary to call this method yourself.

alertFileNotFound

6.0			

Displays the standard file not found alert, with an optional Don't Show Again check box.

Parameters

`oDoc`	`oDoc` is the Doc the alert is associated with
`cFilename`	`cFilename` is the name of the missing file
`bCanSkipAlert`	(optional) If `bCanSkipAlert` is `true` and the user checks the check box, returns `true`, otherwise returns `false`. The default is `false`.

Returns

If `bCanSkipAlert` is `true`, returns `true` if the check box is checked, otherwise returns `false`.

Example

```
if ( !doNotNotify )
{
   var bRetn = app.media.alertFileNotFound(this, cFileClip, true );
   var doNotNotify = bRetn;
}
```

alertSelectFailed

6.0			

Displays the standard alert for a `rendition.select` failure.

Parameters

`oDoc`	The Doc the alert is associated with
`oRejects`	(optional) If provided, an array of `MediaReject` objects as returned by `PlayerInfoList.select`.
`bCanSkipAlert`	(optional) If `true` and the user checks the check box, the method returns `true`; otherwise, the method returns `false`. The default is `false`.
`bFromUser`	(optional) A Boolean value that affects the wording of the alert message. It should be `true` if a direct user action triggered this code, or `false` if some other action, such as selecting a bookmark, triggered it. The default is `false`.

Returns

If `bCanSkipAlert` is `true`, returns `true` if the check box is checked, otherwise returns `false`.

Note: When `rendition.select` fails to find a usable player, and the `select` parameter `bWantRejects` is set to `true`, the returned `MediaSelection` object will contain an array of `MediaReject` objects, which can be passed to this method as the `oRejects` parameter. The `alertSelectFailed` method will, in turn, ask the user to go to the web to download an appropriate player.

Example

Displays Cannot Play Media Clip, with check box.

```
var bRetn = app.media.alertSelectFailed({
   oDoc: this,
   bCanSkipAlert: true
});
```

argsDWIM

6.0			

This method is a "do what I mean" function that is used by `app.media.createPlayer`, `app.media.openPlayer`, and `app.media.startPlayer`. It fills in default values for properties that are not provided in the `PlayerArgs` object, picking them out of the `event` object, so that these functions may be used as rendition action event handlers with no arguments or in custom JavaScript with explicit arguments.

Parameters

`args`	A `PlayerArgs` object (see `app.media.createPlayer`).

Returns

`PlayerArgs` object

Example

See "Example 1" on page 165 for an example of usage.

canPlayOrAlert

6.0			

Determines whether any media playback is allowed and returns `true` if it is. If playback is not allowed, it alerts the user and returns `false`.

Parameters

`args`	A `PlayerArgs` object (see `app.media.createPlayer`).

Returns

`true` if media playback is allowed, otherwise `false`.

Note: The `createPlayer` method calls this function before attempting to create a player. If you write your own code to substitute for `createPlayer`, you can call `canPlayOrAlert` to alert the user in situations where playback is not allowed, such as in multimedia authoring mode.

The only property in the `args` object that is used is `doc`, so you can use the following code.

```
// There is a Doc in myDoc
if( app.media.canPlayOrAlert({ doc: myDoc })
/* OK to create player here */ ;
```

The above code displays "Cannot play media while in authoring mode", or other alerts, as appropriate.

computeFloatWinRect

6.0			

Calculates and returns the rectangle in screen coordinates needed as specified by its parameters.

Parameters

`doc`	The Doc object for the document.
`floating`	The floating parameters from the object returned by `MediaSettings.floating`.
`monitorType`	A number indicating which monitor to use. See the `app.media.monitorType` property.
`uiSize`	(optional) The user interface size given as an array of four numbers [w, x, y, z] representing the size, as returned by `MediaPlayer.uiSize`.

Returns

The rectangle in screen coordinates.

Example

Get the calculated rectangle for a floating window.

```
var floating =
{
   over: app.media.over.monitor,
   align: app.media.align.center,
   canResize: app.media.canResize.no,
```

```
    hasClose: false,
    hasTitle: true,
    width: 400,
    height: 400
}
var rect = app.media.computeFloatWinRect
    (this, floating, app.media.monitorType.primary);
```

constrainRectToScreen

6.0			

Returns a rectangle of screen coordinates, moved and resized if needed to place it entirely on some display monitor. If `anchorPt` is provided and `rect` must be shrunk to fit, it shrinks proportionally toward `anchorPt` (which is an array of two numbers representing a point as [x, y]).

Parameters

`rect`	An array of four numbers representing the screen coordinates of the d rectangle.
`anchorPt`	(optional) An array of two points [x, y] that is to be an anchor point.

Returns

A rectangle in screen coordinates.

createPlayer

6.0			

Creates a `MediaPlayer` object without opening the player.

Note: To open the player, call `MediaPlayer.open`. You can combine these two steps into one by calling `app.media.openPlayer` instead of `createPlayer`.

If `createPlayer` is called inside a rendition action (for example, in custom JavaScript entered from the Actions tab in the Multimedia Properties panel), default values are taken from the action's `event` object. The `args` parameter is not required in this case unless you want to override the rendition action's values. `createPlayer` calls `argsDWIM` to process the `event` object and `args` (see PlayerArgs object object) parameter.

Unless `noStockEvents` of the `PlayerArgs` object is set to `true`, the `MediaPlayer` object is equipped with stock EventListeners that provide the standard behavior required to interact properly with Acrobat. Additional EventListeners can be provided in the PlayerArgs object or may be added afterward with `MediaPlayer.events.add`.

If `args.annot.player` is an open `MediaPlayer`, `createPlayer` closes that player, which triggers events.

Parameters

`args`	A PlayerArgs object, whose required and optional properties are described below. If `createPlayer` is executed within a Rendition action with an associated rendition, this parameter is optional and its properties are populated by the defaults and by options selected in the UI. Otherwise, this parameter is required.

PlayerArgs object

Property	Type	Description
`doc`	Object	The Doc object of the document. Required if both `annot` and `rendition` are omitted, for example, for URL playback.
`annot`	Object	A `ScreenAnnot` object. Required for docked playback unless it is found in the `event` object or `MediaSettings.page` is provided. The new player is associated with the annotation. If a player was already associated with the annotation, it is stopped and closed.
`rendition`	Object	(optional) A `Rendition` object (either a MediaRendition or a RenditionList). Required unless `rendition` is found in the `event` object or `URL` is present.
`URL`	String	Either `URL` or `rendition` is required, with `URL` taking precedence.
`mimeType`	String	(optional) Ignored unless `URL` is present. If `URL` is present, either `mimeType` or `settings.players`, as returned by `app.media.getPlayers`, is required.
`settings`	Object	(optional) A `MediaSettings` object. Overrides the `rendition` settings.
`events`	Object	(optional) An `EventListener` object. Optional if stock events are used, added after stock events.
`noStockEvents`	Boolean	(optional) If `true`, do not use stock events. The default is `false`.
`fromUser`	Boolean	(optional) It should be `true` if a direct user action will trigger this code, or `false`, otherwise. The default depends on the `event` object.
`showAltText`	Boolean	(optional) If `true`, show alternate text (see `Rendition.altText`) if the media cannot be played. The default is `true`.
`showEmptyAltText`	Boolean	(optional) If `true` and alternate text (see `Rendition.altText`) is empty, show the alternate text as an empty box; if `false`, respond with an alert. The default value is `true` if `fromUser` is `false`, and `false` if `fromUser` is `true`.

Returns

`MediaPlayer` object

Example 1

The following code is the definition of `openPlayer`, which uses `createPlayer` in its definition.

```
app.media.openPlayer = function( args )
{
     var player = null;
   try
   {
     args = app.media.argsDWIM( args );

     player = app.media.createPlayer( args );
     if( player )
     {
       var result = player.open();
       if( result.code != app.media.openCode.success )
       {
         player = null;
         app.media.alert
            ( "Open", args, { code: result.code } );
       }
       else if( player.visible )
       player.setFocus();  // triggers Focus event
     }
   }
   catch( e )
   {
     player = null;
     app.media.alert( 'Exception', args, { error: e } );
   }

   return player;
}
```

Example 2

See the examples at the end of the description of `openPlayer` for examples of PlayerArgs usage.

getAltTextData

6.0			

Returns a MediaData object (see `MediaSettings.data`) that represents alternate text data for the given text. This object can be used to create a player to display the alternate text.

Parameters

`cAltText`	A string that is to be used as alternate text data.

Returns

`MediaData` object (see `MediaSettings.data`).

Example

See the embedded example following the `getAltTextSettings` method.

getAltTextSettings

6.0			

Takes a `PlayerArgs` object containing at least `settings`, `showAltText`, and `showEmptyAltText` properties, along with a selection object as returned by `rendition.select`, and finds the first available alternate text rendition if there is one. It then creates and returns a new `MediaSettings` object suitable for playback of the alternate text. Otherwise it returns `null`.

Parameters

`args`	A `PlayerArgs` object
`selection`	A `MediaSelection` object

Returns

`MediaSettings` object or `null`

Example

This example plays back the alternate text of the rendition. The code plays back the alternate text in a screen annotation, but can be modified for playback in a floating window.

```
var rendition = this.media.getRendition("myClip");
var settings = rendition.getPlaySettings();
var args = {
   settings: settings,
   showAltText: true,
   showEmptyAltText: true
};
var selection = rendition.select();
settings = app.media.getAltTextSettings( args, selection );

// You can also play custom alternate text by uncommenting the next line
// settings.data = app.media.getAltTextData("A. C. Robat");

// Uncomment the code below to obtain a floating window to play back
// the alternate text
/*
settings.windowType = app.media.windowType.floating
settings.floating = {
   canResize: app.media.canResize.keepRatio,
```

```
    hasClose: true,
    width: 400,
    height: 100
} */

// Now define an args parameter for use with openPlayer, which will
// play the alternate text.
args = {
    rendition: rendition,
    annot: this.media.getAnnot({nPage: 0, cAnnotTitle:"myScreen"}),
    settings: settings
};
app.media.openPlayer(args);
```

getAnnotStockEvents

6.0			

Returns an `event` object containing the stock EventListeners required in a screen annotation for normal playback in Acrobat. The stock EventListeners provide standard Acrobat behavior such as focus handling.

If `app.media.trace` is `true`, debug trace listeners are also included with the stock EventListeners.

Parameters

`settings`	A number corresponding to the window type (see `app.media.windowType`).

Returns

`event` object

getAnnotTraceEvents

6.0			

Returns an `Events` object containing EventListeners that provide a debugging trace as events are dispatched.

Returns

`Events` object

getPlayers

6.0			

Returns a `PlayerInfoList` object, which is an array of `PlayerInfo` objects representing the available media players.

The PlayerInfoList may be filtered using its `select` method, and it may be used in the `settings.players` property when creating a media player with `createPlayer`.

See `PlayerInfoList` object and `PlayerInfo` object for more details.

Parameters

`cMimeType`	(optional) An optional MIME type such as "audio/wav". If `cMimeType` is omitted, the list includes all available players. If `cMimeType` is specified, the list includes only players that can handle that MIME type.

Returns

`PlayerInfoList` object

Example 1

List MP3 players to the debug console.

```
var mp = app.media.getPlayers("audio/mp3")
for ( var i = 0; i < mp.length; i++) {
   console.println("\nmp[" + i + "] Properties");
   for ( var p in mp[i] ) console.println(p + ": " + mp[i][p]);
}
```

Example 2

Choose any player that can play Flash media by matching the MIME type. The code assumes the code below is executed as a Rendition action with associated rendition (so no arguments for `createPlayer` are required).

```
var player = app.media.createPlayer();
player.settings.players
   = app.media.getPlayers( "application/x-shockwave-flash" );
player.open();
```

getPlayerStockEvents

6.0			

Returns an `Events` object containing the stock EventListeners required in a media player for normal playback in Acrobat. The stock EventListeners provide standard Acrobat behavior such as focus handling.

Use `MediaPlayer.events.add` to add these stock events to a media player.

The `app.media.createPlayer` and `app.media.openPlayer` methods automatically call `getPlayerStockEvents` internally, so it is not necessary to call this method yourself unless you are writing code that sets up all EventListeners explicitly.

If `app.media.trace` is `true`, debug trace listeners are also included with the stock EventListeners.

Parameters

`settings`	A `MediaSettings` object.

Returns

`Events` object

getPlayerTraceEvents

6.0			

Returns an `Events` object containing EventListeners that provide a debugging trace as events are dispatched.

Returns

An `Events` object

getRenditionSettings

6.0			

Calls `Rendition.select` to get a `MediaSelection` object, then `MediaSelection.rendition.getPlaySettings` to get a `MediaSettings` object for playback. If either of these fails, it calls the `getAltTextSettings` method to get a `MediaSettings` object for alternate text playback. Finally, it returns the resulting `MediaSettings` object, or `null` if `getAltTextSettings` returned `null` (that is, alternate text was not specified or not allowed).

Parameters

`args`	A `PlayerArgs` object.

Returns

`MediaSettings` object or `null`

Example

See "Example 3" on page 173.

getURLData

6.0			

Returns a MediaData object (see `MediaSettings.data`) that represents data to be retrieved for a URL and optional MIME type. This MediaData object can be used to create a player that accesses data from that URL.

Parameters

`cURL`	The URL from which media data is to be retrieved.
`cMimeType`	(optional) The MIME type of the data.

Returns

`MediaData` object

Example

Retrieve a media clip from the Internet and plays it in a floating window.

```
var myURLClip = "http://www.example.com/myClip.mpg";
var args = {
   URL: myURLClip,
   mimeType: "video/x-mpg",
   doc: this,
   settings: {
      players: app.media.getPlayers("video/x-mpg"),
      windowType: app.media.windowType.floating,
      data: app.media.getURLData(myURLClip,"video/x-mpg"),
      floating: { height: 400, width: 600 }
   }
}
app.media.openPlayer(args);
```

getURLSettings

6.0			

Takes a `PlayerArgs` object that contains a `settings` property and returns a `MediaSettings` object suitable for playback of a URL. The settings property must contain a `URL` property and may contain a `mimeType` property. It may also contain additional settings that are copied into the resulting settings object.

Parameters

`args`	A `PlayerArgs` object.

Returns

`MediaSettings` object

Example 1

Same example as above. `getURLSettings` calls `getURLData` and inserts the return `MediaData` object into the `data` property into the `setting`, which it then returns.

```
var myURLClip = "http://www.example.com/myClip.mpg";
args = {
   URL: myURLClip,
   mimeType: "video/x-mpg",
   doc: this,
   settings:
   {
      players: app.media.getPlayers("video/x-mpg"),
      windowType: app.media.windowType.floating,
      floating: { height: 400, width: 600 }
   }
};
settings = app.media.getURLSettings(args)
args.settings = settings;
app.media.openPlayer(args);
```

Example 2

The example below is a custom keystroke action of a combo box. The combo box is a simple playlist of streamed audio and video websites. The export value of each element in the list has the form "URL,mimeType", for example

```
http://www.example.com/streaming/radio.asx,video/x-ms-asx
```

The script below splits the export value into a 2-element array, where the first element is the URL and the second is the mimeType. Any video is shown in the screen annotation "myScreen". Otherwise, only audio is heard.

```
if (!event.willCommit)
{
   var aURLMime = event.changeEx.split(",")
   console.println("aURLMime[0] = " + aURLMime[0]);
   console.println("aURLMime[1] = " + aURLMime[1]);
   var args = {
      annot:this.media.getAnnot({ nPage:0,cAnnotTitle: "myScreen" }),
      URL: aURLMime[0],
      mimeType: aURLMime[1],
      doc: this,
      settings: {
         players: app.media.getPlayers(aURLMime[1]),
         windowType: app.media.windowType.docked
      }
   };
   settings = app.media.getURLSettings(args);
   args.settings = settings;
   var player = app.media.openPlayer(args);
}
```

getWindowBorderSize

6.0			

Returns an array of four numbers representing the size in pixels of the left, top, right, and bottom borders that would be used for a floating window with the properties specified in the parameters.

The `hasTitle` and `hasClose` parameters are Boolean values, and `canResize` may be any of the values in `app.media.canResize`.

These parameters have the same names as properties of a `MediaSettings.floating` object, so you can simply pass in a floating object as a single parameter:

```
var size = doc.media.getWindowBorderSize( settings.floating );
```

Parameters

`hasTitle`	(optional) The default is `true`.
`hasClose`	(optional) The default is `true`.
`canResize`	(optional) The default is `app.media.canResize.no`.

Returns

An array of 4 numbers.

openPlayer

6.0			

Calls `app.media.createPlayer` to create a `MediaPlayer` object and then calls `MediaPlayer.open` to open the player.

This method triggers several events, which may include `Ready` (see `onReady` and `afterReady`), `Play` (see `onPlay` and `afterPlay`), and `Focus` (see `onFocus` and `afterFocus`). See the `EventListener` object for a general description of these events.

The method alerts the user and returns `null` on failure. It does not throw exceptions.

Parameters

`args`	(optional) A `PlayerArgs` object.

Returns

A `MediaPlayer` object, or `null` on failure

Example 1

This minimal example is a custom JavaScript from the Actions tab in the Multimedia Properties panel of a screen annotation. To override the parameters specified by the UI of the screen annotation, the `args` parameter is passed.

```
app.media.openPlayer();
```

Override `settings.repeat`: if repeat is set to 1, change it to 2. Otherwise, set it to 1.

```
var nRepeat =
   ( event.action.rendition.getPlaySettings().repeat == 1 ) ? 2 : 1;
var args = { settings: { repeat: nRepeat } };
app.media.openPlayer(args);
```

See the event object for an explanation of `event.action.rendition`. The above example also uses `Rendition.getPlaySettings` to access the settings associated with the rendition to be played (the one associated with the screen annotation).

Example 2

The following script is executed from a mouse-up action of a form button. It plays a docked media clip in a screen annotation.

```
app.media.openPlayer({
   rendition: this.media.getRendition( "myClip" ),
   annot: this.media.getAnnot( {nPage:0,cAnnotTitle:"myScreen"} ),
   settings: { windowType: app.media.windowType.docked }
});
```

Example 3

This example is a custom JavaScript from the Actions tab in the Multimedia Properties of a screen annotation. The user clicks the annotation and a randomly chosen movie clip is played.

```
// These are placed at the top level of the document JavaScript
var myRenditions = new Array();
myRenditions[0] = "myClip1";
myRenditions[1] = "myClip2";
myRenditions[2] = "myClip3";

// This code is a custom JavaScript of a ScreenAnnot. All renditions
// are docked and are played in the ScreenAnnot.
var l = myRenditions.length;
randomIndex = Math.floor( Math.random() * l ) % l;

var rendition = this.media.getRendition(myRenditions[randomIndex]);
var settings = app.media.getRenditionSettings({ rendition: rendition });

var args = { rendition: rendition, settings: settings }
app.media.openPlayer(args);
```

removeStockEvents

6.0			

Removes any stock EventListeners from a `MediaPlayer` object and from any associated `ScreenAnnot` object and deletes the `player.stockEvents`, `player.annot`, `annot.stockEvents`, and `annot.player` properties. This undoes the effect of a previous `addStockEvents` call.

Parameters

`player`	A `MediaPlayer` object

startPlayer

6.0			

Checks whether an annotation is provided in the `PlayerArgs` object and the annotation already has a player open. If so, it calls `player.play` on that player to start or resume playback. If not, it calls `app.media.openPlayer` to create and open a new `MediaPlayer` object. See `openPlayer` for more details.

Note: `app.media.startPlayer` is the default mouse-up action when you use the Acrobat user interface to create a multimedia annotation and rendition and you do not specify any custom JavaScript.

Parameters

`args`	(optional) A `PlayerArgs` object

Returns

A `MediaPlayer` object or `null` on failure

Example

Start a screen annotation from a form button.

```
var args = {
   rendition: this.media.getRendition( "myClip" ),
   annot: this.media.getAnnot({ nPage: 0, cAnnotTitle: "myScreen" }),
};
app.media.startPlayer(args);
```

Bookmark

A Bookmark object represents a node in the bookmark tree that appears in the bookmarks navigational panel. Bookmarks are typically used as a table of contents allowing the user to navigate quickly to topics of interest.

Bookmark properties

children

5.0			

An array of `Bookmark` objects that are the children of this bookmark in the bookmark tree. If there are no children of this bookmark, this property has a value of `null`.

See also the `parent` and `bookmarkRoot` properties.

Type

Array | `null`

Access

R

Example

Dump all bookmarks in the document.

```
function DumpBookmark(bkm, nLevel)
{
   var s = "";
   for (var i = 0; i < nLevel; i++) s += " ";
   console.println(s + "+-" + bkm.name);
   if (bkm.children != null)
      for (var i = 0; i < bkm.children.length; i++)
         DumpBookmark(bkm.children[i], nLevel + 1);
}
console.clear(); console.show();
console.println("Dumping all bookmarks in the document.");
DumpBookmark(this.bookmarkRoot, 0);
```

color

5.0	D		X

Specifies the color for a bookmark. Values are defined by using gray, RGB or CMYK color. See "Color arrays" on page 193 for information on defining color arrays and how values are used with this property. See also the `style` property.

Type

Array

Access

R/W (Adobe Reader: R only)

Example

The following fun script colors the top-level bookmark red, green, and blue.

```
var bkm = this.bookmarkRoot.children[0];
bkm.color = color.black;
var C = new Array(1, 0, 0);
var run = app.setInterval(
   'bkm.color = ["RGB",C[0],C[1],C[2]]; C.push(C.shift());', 1000);
var stoprun=app.setTimeOut(
   "app.clearInterval(run); bkm.color=color.black",12000);
```

doc

5.0			

The Doc that the bookmark resides in.

Type

Object

Access

R

name

5.0	D		X

The text string for the bookmark that the user sees in the navigational panel.

Type

String

Access

R/W (Adobe Reader: R only)

Example

Put the top-level bookmark in bold.

```
var bkm = this.bookmarkRoot.children[0];
console.println( "Top-level bookmark name: " + bkm.name );
```

The example that follows the children property also uses the name property.

open

5.0	D		X

Determines whether the bookmark shows its children in the navigation panel (open) or whether the children subtree is collapsed (closed).

Type

Boolean

Access

R/W (Adobe Reader: R only)

parent

5.0			

The parent bookmark of the bookmark or null if the bookmark is the root bookmark. See also the children and bookmarkRoot properties.

Type

Object | null

Access

R

style

5.0	D		X

Specifies the style for the bookmark's font: 0 is normal, 1 is italic, 2 is bold, and 3 is bold-italic. See also the color property.

Type

Integer

Access

R/W (Adobe Reader: R only)

Example

The following code puts the top-level bookmark in bold.

```
var bkm = this.bookmarkRoot.children[0];
bkm.style = 2;
```

Bookmark methods

createChild

5.0	D		X

Creates a new child bookmark at the specified location.

See also the `children` property and the `insertChild` and `remove` methods.

Parameters

`cName`	The name of the bookmark that the user sees in the navigation panel.
`cExpr`	(optional) An expression to be evaluated whenever the user clicks the bookmark. It is equivalent to creating a bookmark with a JavaScript action, as described in the *PDF Reference* version 1.7. The default is no expression.
`nIndex`	(optional) The 0-based index into the children array of the bookmark at which to create the new child. The default is 0.

Example

Create a bookmark at the top of the bookmark panel that takes you to the next page in the document.

```
this.bookmarkRoot.createChild("Next Page", "this.pageNum++");
```

execute

5.0			

Executes the action associated with this bookmark. This can have a variety of behaviors. See the *PDF Reference* version 1.7 for a list of common action types. See also the `createChild` method.

Example

Implement a simple search of the bookmarks. If successful, the action associated with the bookmark is executed.

```
// Document-level or folder-level JavaScript.
function searchBookmarks(bkm, nLevel, bkmName)
{
   if ( bkm.name == bkmName ) return bkm;
   if (bkm.children != null) {
      for (var i = 0; i < bkm.children.length; i++)
      {
         var bkMark = searchBookmarks(
            bkm.children[i], nLevel + 1, bkmName);
         if ( bkMark != null ) break;
      }
      return bkMark;
   }
   return null;
}
// Redefine this function for a more sophisticated compare.
function bmkCompare( name1, name2 )
{
      return ( name1 == name2 );
}
```

The following code initiates the search. This code could be executed as field-level JavaScript or be executed as a menu action.

```
var bkmName = app.response({
   cQuestion: "Enter the name of the bookmark to find",
   cTitle: "Bookmark Search and Execute"
});
if ( bkmName != null ) {
   var bkm = searchBookmarks(this.bookmarkRoot, 0, bkmName );
   if ( bkm != null ) bkm.execute();
   else app.alert("Bookmark not found");
}
```

insertChild

5.0	D		X

Inserts the specified bookmark as a child of this bookmark. If the bookmark already exists in the bookmark tree, it is unlinked before inserting it back into the tree. In addition, the insertion is checked for circularities and disallowed if one exists. This prevents users from inserting a bookmark as a child or grandchild of itself. See also the `children` property and the `createChild` and `remove` methods.

Parameters

`oBookmark`	A bookmark object to add as the child of this bookmark.
`nIndex`	(optional) The 0-based index into the children array of the bookmark at which to insert the new child. The default is 0.

Example

Take the first child bookmark and move it to the end of the bookmarks.

```
var bm = bookmarkRoot.children[0];
bookmarkRoot.insertChild(bm, bookmarkRoot.children.length);
```

remove

5.0	D		X

Removes the bookmark and all its children from the bookmark tree. See also the `children` property and the `createChild` and `insertChild` methods.

Example

Remove all bookmarks from the document.

```
bookmarkRoot.remove();
```

setAction

6.0			X

Sets a JavaScript action for a bookmark.

See also the Doc `addRequirement` and `setPageAction` methods and the Field object `setAction` method.

Note: This method overwrites any action already defined for this bookmark.

Parameters

`cScript`	Defines the JavaScript expression that is to be executed whenever the user clicks the bookmark.

Example

Attach an action to the topmost bookmark.

```
var bm = bookmarkRoot.children[0]
bm.setAction("app.beep(0);");
```

catalog

A static object that accesses the functionality provided by the Acrobat Catalog plug-in. This plug-in must be installed to interface with the `catalog` object.

Note: The Catalog plug-in (and the `catalog` object) is available only in Acrobat Professional.

See also the `Index` object, which is used to invoke various indexing operations provided by the Catalog plug-in, and the `CatalogJob` object.

catalog properties

isIdle

6.0			P

Returns `true` when Catalog is not busy with an indexing job.

Type

Boolean

Access

R

jobs

6.0			P

Gets information about the Catalog jobs. Catalog maintains a list of its pending, in-progress, and completed jobs for each Acrobat session. Returns an array of `CatalogJob` objects.

Type

Array

Access

R

catalog methods

getIndex

6.0			P

Uses a specified path of a Catalog index to get an `Index` object. The returned object can be used to perform various indexing operations such as building or deleting an index.

Parameters

`cDIPath`	The device-independent path of a Catalog index.

Returns

The `Index` object.

remove

6.0			P

Removes the specified `CatalogJob` object from Catalog's job list. Catalog maintains a list of pending, in-progress, and completed jobs for each Acrobat session.

Parameters

`oJob`	The `CatalogJob` object to remove, as returned by the `jobs` property and various methods of the `Index` object.

Example

Delete all jobs that are pending and need complete rebuild.

```
if (typeof catalog != undefined)  {
   for (var i=0; i<catalog.jobs.length; i++){
      var job = catalog.jobs[i];
      console.println("Index: ", job.path);

      if (job.status == "Pending" && job.type == "Rebuild")
         catalog.remove(job);
   }
}
```

CatalogJob

This generic JavaScript object provides information about a job submitted to Catalog. It is returned by the `build` method of the `Index` object and the `catalog.jobs` property, and passed to `catalog.remove`.

CatalogJob properties

path

Device-independent path of the index associated with the job

Type

String

Access

R

type

Type of indexing operation associated with the job. Possible values are:

```
Build
Rebuild
Delete
```

Type

String

Access

R

status

The status of the indexing operation. Possible values are:

```
Pending
Processing
Completed
CompletedWithErrors
```

Type

String

Access

R

Certificate

The Certificate object provides read-only access to the properties of an X.509 public key certificate.

Related objects and methods are:

`security` object: `importFromFile` and `getSecurityPolicies`

`DirConnection` object: `search`

Field object: `signatureInfo`

`FDF` object: `signatureValidate`

`RDN` object

Usage Object

Note: There are no security restrictions on this object.

Certificate properties

binary

5.0			

The raw bytes of the certificate, as a hex encoded string.

Type

String

Access

R

issuerDN

5.0			

The distinguished name of the issuer of the certificate, returned as an `RDN` object.

Type

`RDN` object

Access

R

keyUsage

6.0			

An array of strings indicating the value of the certificate key usage extension. Possible values are

```
kDigitalSignature   kDataEncipherment   kCRLSign
kNonRepudiation     kKeyAgreement       kEncipherOnly
kKeyEncipherment    kKeyCertSign        kDecipherOnly
```

Type

Array of Strings

Access

R

MD5Hash

5.0			

The MD5 digest of the certificate, represented as a hex-encoded string. This provides a unique fingerprint for this certificate.

Type

String

Access

R

privateKeyValidityEnd

8.0			

The date before which it's legal to use the private key associated with this certificate. If the PKUP extension is not present or this property isn't present in the extension, this represents the validity end date of the certificate itself. Before a digital ID can be used for signing, Acrobat ensures that the signing time is prior to the `privateKeyValidityEnd` date.

Type

Date object

Access

R

privateKeyValidityStart

8.0			

The date after which it's legal to use the private key associated with this certificate. If the Private Key Usage Period (PKUP) certificate extension is not present, this represents the validity start date of the certificate itself. Before a digital ID can be used for signing, Acrobat ensures that the signing time is more recent than the `privateKeyValidityStart` date.

Type

Date object

Access

R

SHA1Hash

5.0			

The SHA1 digest of the certificate, represented as a hex-encoded string. This provides a unique fingerprint for this certificate.

Type

String

Access

R

serialNumber

5.0			

A unique identifier for this certificate, used in conjunction with `issuerDN`.

Type

String

Access

R

subjectCN

5.0			

The common name of the signer.

Type

String

Access

R

subjectDN

5.0			

The distinguished name of the signer, returned as an RDN object.

Type

`RDN` object

Access

R

ubRights

7.0			

The application rights that can be enabled by this certificate, returned as a generic `Rights` object.

Type

Rights object

Access

R

Rights Object

A `Rights` object has the following properties.

Property	Type	Access	Description
`mode`	String	R	Possible values are: **`Evaluation`** — Rights enabled by this certificate for this document are valid as long as this certificate is valid. **`Production`** — Rights enabled by this certificate for this document are valid for eternity. Currently, this value is not used by Adobe's PDF viewer.
`rights`	Array of Strings	R	Array of strings indicating the application rights that can be enabled by this certificate. Possible values are: **`FormFillInAndSave`** — The right to fill in forms, excluding signature fields, and to save the modified file. **`FormImportExport`** — The right to import and export form data. **`FormAddDelete`** — The right to add or delete a form field. **`SubmitStandalone`** — The right to submit a document outside a browser. **`SpawnTemplate`** — The right to spawn page templates. **`Signing`** — The right to sign existing form fields in a document. **`AnnotModify`** — The right to create, delete, and modify comments. **`AnnotImportExport`** — The right to import and export annotations. **`BarcodePlaintext`** — The right to encode the appearance of a form field as a plain text barcode. **`AnnotOnline`** — Allow online commenting. Enables uploading of any annotations in the document to a server and downloading of annotations from a server. Does not enable the addition of these annotations into the document. **`FormOnline`** — Enable forms-specific online mechanisms such as SOAP or Active Data Object. **`EFModify`** — The right to create, delete, modify, and import named embedded files. Does not apply to file attachment annotations.

usage

6.0			

The purposes for which this certificate may be used within the Acrobat environment returned as a `Usage` object.

Type

Usage object

Access

R

Usage Object

This generic JavaScript object represents a certificate usage value in the `certificate.usage` property. It has the following properties.

Property	Type	Access	Description
`endUserSigning`	Boolean	R	`true` if the certificate is usable for end-user signing.
`endUserEncryption`	Boolean	R	`true` if the certificate is usable for end-user encryption.

Example

Encrypt the currently open document for everyone in the address book. Address book entries that contain sign-only certificates, CA certificates, no certificates, or are otherwise unsuitable for encryption, are not included in the final recipient list.

```
var eng = security.getHandler( "Adobe.AAB" );
var dc = eng.directories[0].connect();
var recipients = dc.search();

var filteredRecipients = new Array();
for( i = 0; i < recipients.length; ++i ) {
   if( recipients[i].defaultEncryptCert &&
      recipients[i].defaultEncryptCert.usage.endUserEncryption ) {
      filteredRecipients[filteredRecipients.length] = recipients[i];
      continue;
   }
   if(recipients[i].certificates) {
      for( j = 0; j < recipients[i].certificates.length; ++j )
         if( recipients[i].certificates[j].usage.endUserEncryption ) {
            filteredRecipients[filteredRecipients.length]
               = recipients[i];
            continue;
         }
   }
}
this.encryptForRecipients({
   oGroups:[{userEntities: filteredRecipients}]
});
```

validityEnd

7.0.5			

The validity end date of the certificate. Before a digital ID can be used for signing, Acrobat ensures that the signing time is prior to the `validityEnd` date.

Type

Date object

Access

R

validityStart

7.0.5			

The validity start date of the certificate. Before a digital ID can be used for signing Acrobat, ensures that the signing time is more recent than the `validityStart` date.

Type

Date object

Access

R

Collab

This static object represents the collaboration functionality.

Collab methods

addStateModel

6.0			

Adds a new state model to Acrobat. A state model describes the valid states that an annotation using the model can have (see the `Annotation` object for details about getting and setting the state of an annotation). State models can be used to describe the workflow that a document review goes through and can be used for review management.

See also `removeStateModel`, `getStateInModel`, and `transitionToState`.

Parameters

`cName`	A unique, language-independent identifier for the State Model.
`cUIName`	The display name of the state model used in the user interface. The value should be a localized string.
`oStates`	The states in the state model, described by a `States` object.
`cDefault`	(optional) One of the states in the model to be used as a default state if no other state is set. The default is for there to be no default state.
`bHidden`	(optional) Specifies whether the state model should be hidden in the state model user interface. The default is `false` (the State Model is shown).
`bHistory`	(optional) Specifies whether an audit history is maintained for the state model. Keeping an audit history requires more space in the file. The default is `true`.

States object

This generic object represents a set of states in a state model and is passed as the `oStates` parameter. The elements in the object literal are the unique state identifiers and the values are objects having the following properties:

Property	Description
`cUIName`	The UI (display name) for the state.
`oIcon`	(optional) An `Icon Stream` object that is displayed in the UI for the state.

Example

Add a new state model with a unique name of “ReviewStates”:

```
Collab.addStateModel({
   cName: "ReviewStates",
   cUIName: "My Review",
```

```
    oStates:
    {
       "initial": {cUIName: "Haven't reviewed it"},
       "approved": {cUIName: "I approve"},
       "rejected": {cUIName: "Forget it"},
       "resubmit": {cUIName: "Make some changes"}
    },
    cDefault: "initial"
});
```

A state model can be removed with `Collab.removeStateModel`.

documentToStream

7.0.5			S

Saves a copy of a Doc and returns the contents as a stream object.

The document `dirty` property is preserved after this method is called and the original document is not modified.

Parameters

`oDocument`	The Doc.

Returns

A `ReadStream` object.

removeStateModel

6.0			

Removes a state model that was previously added by calling `addStateModel`. Removing a state model does not remove the state information associated with individual annotations. If the model is removed and added again, all of the state information for the annotations is still available.

See also `addStateModel`, `getStateInModel`, and `transitionToState`.

Parameters

`cName`	A unique, language-independent identifier for the state model that was used in `addStateModel`.

Example

Continuing the example in `addStateModel`, remove the state model "ReviewStates":

```
// Remove the state model
Collab.removeStateModel("ReviewStates");
```

color

The `color` object is a convenience static object that defines the basic colors. Use this object to set a property or call a method that requires a color array.

Color arrays

A color is represented in JavaScript as an array containing 1, 2, 4, or 5 elements corresponding to a Transparent, Gray, RGB, or CMYK color space, respectively. The first element in the array is a string denoting the color space type. The subsequent elements are numbers that range between zero and one inclusive. For example, the color red can be represented as `["RGB", 1, 0, 0]`.

Invalid strings or insufficient elements in a color array cause the color to be interpreted as the color black.

Color space	String	Number of additional elements	Description
Transparent	"T"	0	A *transparent* color space indicates a complete absence of color and allows those portions of the document underlying the current field to show through.
Gray	"G"	1	Colors are represented by a single value—the intensity of achromatic light. In this color space, 0 is black, 1 is white, and intermediate values represent shades of gray. For example, .5 represents medium gray.
RGB	"RGB"	3	Colors are represented by three values: the intensity of the *red, green*, and *blue* components in the output. RGB is commonly used for video displays, which are generally based on red, green, and blue phosphors.
CMYK	"CMYK"	4	Colors are represented by four values, the amounts of the cyan, magenta, yellow, and black components in the output. This color space is commonly used for color printers, where they are the colors of the inks used in four-color printing. Only cyan, magenta, and yellow are necessary, but black is generally used in printing because black ink produces a better black than a mixture of cyan, magenta, and yellow inks and because black ink is less expensive than the other inks.

color properties

The `color` object defines the following colors.

Color object	Keyword	Equivalent JavaScript	Version
Transparent	`color.transparent`	`[ "T" ]`	
Black	`color.black`	`[ "G", 0 ]`	

Color object	Keyword	Equivalent JavaScript	Version
White	`color.white`	`[ "G", 1 ]`	
Red	`color.red`	`[ "RGB", 1,0,0 ]`	
Green	`color.green`	`[ "RGB", 0,1,0 ]`	
Blue	`color.blue`	`[ "RGB", 0, 0, 1 ]`	
Cyan	`color.cyan`	`[ "CMYK", 1,0,0,0 ]`	
Magenta	`color.magenta`	`[ "CMYK", 0,1 0,0 ]`	
Yellow	`color.yellow`	`[ "CMYK", 0,0,1,0 ]`	
Dark Gray	`color.dkGray`	`[ "G", 0.25 ]`	4.0
Gray	`color.gray`	`[ "G", 0.5 ]`	4.0
Light Gray	`color.ltGray`	`[ "G", 0.75 ]`	4.0

Example

This example sets the text color of the field to red if the value of the field is negative, or to black if the field value is nonnegative.

```
var f = event.target; /* field that the event occurs at */
f.target.textColor = event.value < 0 ? color.red : color.black;
```

color methods

convert

5.0			

Converts the color space and color values specified by the `color` object to the specified color space:

- Conversion to the gray color space is lossy (in the same fashion that displaying a color TV signal on a black-and-white TV is lossy).
- The conversion of RGB to CMYK does not take into account any black generation or undercolor removal parameters.

Parameters

`colorArray`	Array of color values. See "Color arrays" on page 193.
`cColorspace`	The color space to which to convert.

Returns

A color array.

Example

The return value of the code line below is the array `["CMYK", 0, 1, 1, 0]`.

```
color.convert(["RGB",1,0,0], "CMYK");
```

equal

5.0			

Compares two `Color Arrays` to see if they are the same. The routine performs conversions, if necessary, to determine if the two colors are indeed equal (for example, `["RGB",1,1,0]` is equal to `["CMYK",0,0,1,0]`).

Parameters

`colorArray1`	The first color array for comparison.
`colorArray2`	The second color array for comparison.

Returns

`true` if the arrays represent the same color, `false` otherwise.

Example

```
var f = this.getField("foo");
if (color.equal(f.textColor, f.fillColor))
   app.alert("Foreground and background color are the same!");
```

colorConvertAction

This object describes a single color conversion action.

You can obtain colorConvertAction object from the Doc object method `getColorConvertAction`, see page 299. The returned object can then be modified. A color conversion action is divided into a "match" section and an "action" section. The "match" section describes what sorts of objects can match this action. The Doc object method `colorConvertPage`, page 278, accepts an array of these actions, against which matches are attempted until a match is found.

colorConvertAction properties

action

8.0			P

Describes the action to perform if a match occurs.

The value of `action` is accessed through the `constants.actions` object of the colorConvertAction object as the following constants:

constants.actions object

Name	Description
`Preserve`	Do nothing but handle ink aliases.
`Convert`	Convert to target space.
`Decalibrate`	Convert calibrated space to device.
`DownConvert`	Downconvert NChannel to DeviceN.

Type

Integer

Access

R/W

alias

8.0			P

If this action is an ink action then this describes the ink's alias.

Type

String

Access

R/W

colorantName

8.0			P

If this action is an ink action then this describes the colorant name.

See the related property `isProcessColor`.

Type

String

Access

R/W

convertIntent

8.0			P

Defines the rendering intent used to color convert the object. For a detailed description of rendering intents, please see Table 4.20 of the *PDF Reference* version 1.7.

The value of convertIntent is accessed through the `constants.renderingIntents` object of the colorConvertAction object. For the properties of the `constants.renderingIntents` object, see page 200.

Type

Integer

Access

R/W

convertProfile

8.0			P

Describes the color profile to which matching objects should be converted if the action is `Convert`. A list of available color profiles can be obtained from the `printColorProfiles` property of the `app` object

Type

String

Access

R/W

embed

8.0			P

If the matched object is to be converted and `embed` is `true`, the resulting object will have a color profile embedded in the file. Otherwise, the object will be stored as the corresponding device color space for the profile to which the object was converted.

Type

Boolean

Access

R/W

isProcessColor

8.0			P

If this action is an ink action and if `isProcessColor` is `true`, the ink represents a process color, and the `colorantName` should be one of `Cyan`, `Magenta`, `Yellow`, `Black`, `Red`, `Green` or `Blue`.

Type

Boolean

Access

R/W

matchAttributesAll

8.0			P

The value of the `matchAttributesAll` property is a bitmap containing object attributes (flags) to be matched. A match occurs if all flags match, i.e. if there is a complete match.

The flags are accessed through the `constants.objectFlags` object of the colorConvertAction object and are defined as follows:

constants.objectFlags object

Flag name	Description
`ObjImage`	Object is an image.
`ObjJPEG`	Object is a JPEG image.
`ObjJPEG2000`	Object is a JPEG2000 Image.
`ObjLossy`	Image in a lossy space.
`ObjNonLossy`	Image in a non-lossy space.
`ObjText`	Object is text.
`ObjLineArt`	Object is line-art (fill or stroke).
`ObjShade`	Object is a smooth shade.
`ObjTransparent`	Object is not opaque.
`ObjOverprinting`	Object overprints.
`ObjOverprintMode`	OPM is set to 1.

Note: The value of `matchAttributesAll` can be set by using the bitwise operators with the bit flags of `constants.objectFlags`.

Type

Integer

Access

R/W

Example:

Match images that overprint.

```
var action = this.getColorConvertAction();
action.matchAttributesAll = action.constants.objFlags.ObjImage  |
                        action.constants.objFlags.ObjOverprinting;
```

matchAttributesAny

8.0			P

The value of the `matchAttributesAny` property is a bitmap containing object attributes to be matched. A match occurs if any of the flags match.

The flags are accessed through the `constants.objectFlags` object of the colorConvertAction object. For the properties of the `constants.objectFlags` object, see page 199.

Note: The value of `matchAttributesAny` can be set by using the bitwise operators with the bit flags of `constants.objectFlags`.

Type

Integer

Access

R/W

matchIntent

8.0			P

Matches the rendering intent used for the object. For a detailed description of rendering intents, please see Table 4.20 of the *PDF Reference* version 1.7.

The value of `matchIntent` is accessed through the `constants.renderingIntents` object of the colorConvertAction object and are defined as follows:

constants.renderingIntents object

Name	Description
`AbsoluteColorimetric`	Absolute colorimetric rendering intent.
`RelativeColorimetric`	Relative colorimetric rendering intent.
`Saturation`	Saturation rendering intent
`Perceptual`	Perceptual rendering intent
`Any`	Match any of the above rendering intents
`Document`	Use the rendering intent specified by the current graphics state in which the matched object is rendered (used by convertIntent only).

Type

Integer

Access

R/W

matchSpaceTypeAll

8.0			P

The value of the `matchSpaceTypeAll` property is a bitmap containing color space attributes (flags) to be matched. A match occurs if all flags match, i.e. if there is a complete match.

These two fields are bitmaps containing color space attributes to be matched. The first field will only match if all flags match, i.e. if there is a complete match. The second field will match if any of the flags match.

The flags are accessed through the `constants.spaceFlags` object of the colorConvertAction object and are defined as follows:

constants.spaceFlags object

Flag name	Description
`DeviceSpace`	Color space is one of DeviceRGB, DeviceCMYK, or DeviceGray.
`CalibratedSpace`	Color space is ICCBased, CalRGB, CalGray, or Lab.
`AlternateSpace`	This color space is the alternate space of a DeviceN, Separation, or ICCBased.
`BaseSpace`	This color space is the base space of an Indexed space.
`IndexedSpace`	This color space is an indexed space.
`SeparationSpace`	This color space is a Separation color space.
`DeviceNSpace`	This color space is a DeviceN color space.
`NChannelSpace`	This color space is a DeviceN color space with NChannel attributes.
`RGBSpace`	This space is RGB. This flag should only be used in combination with `DeviceSpace` or `CalibratedSpace`.
`CMYKSpace`	This space is CMYK. This flag should only be used in combination with `DeviceSpace` or `CalibratedSpace`.
`GraySpace`	This space is Grayscale. This flag should only be used in combination with `DeviceSpace` or `CalibratedSpace`.
`LabSpace`	This space is CIELAB. This flag should only be used in combination with **`DeviceSpace`** or `CalibratedSpace`.

Note: The value of `matchSpaceTypeAll` can be set by using the bitwise operators with the bit flags of `constants.spaceFlags`.

Type

Integer

Access

R/W

matchSpaceTypeAny

8.0			P

The value of the `matchSpaceTypeAny` property is a bitmap containing color space attributes (flags) to be matched. A match occurs if any of the flags match.

The flags are accessed through the `constants.spaceFlags` object of the colorConvertAction object. For the properties of the `constants.objectFlags` object, see page 201.

Note: The value of `matchSpaceTypeAny` can be set by using the bitwise operators with the bit flags of `constants.spaceFlags`.

Type

Integer

Access

R/W

preserveBlack

8.0			P

If the matched object is to be converted and `preserveBlack` is `true`, the conversion will be done using a "black-preserving" transform, in which text or line art objects are handled specially. If a CMYK color is (0.0, 0.0, 0.0, 1.0), an RGB color is (0.0, 0.0, 0.0) or a gray color is (0.0), and `preserveBlack` is `true`, that color is considered special-case black, and is converted straight to black without using the conversion profile. The resulting color will be as described for the matching black color for the corresponding profile target color space, for example, if the convert profile is RGB, the resulting color will be (0.0, 0.0, 0.0) no matter what the color profile says.

Type

Boolean

Access

R/W

useBlackPointCompensation

8.0			P

If `useBlackPointCompensation` is true, `use` black point compensation for all color conversions. The effect of this flag depends on the color management method (CMM) being used, but if the Adobe CMM is being used, colorimetric transforms are scaled such that black remains black no matter what the media black point of the source profile.

Type

Boolean

Access

R/W

Column

This generic JavaScript object contains the data from every row in a column. A column object is returned by the `getColumn` and `getColumnArray` methods of the `Statement` object. See also the `ColumnInfo` object.

Column properties

columnNum

The number identifying the column.

Type

number

Access

R

name

The name of the column.

Type

string

Access

R

type

One of the `SQL Types` for the data in the column.

Type

number

Access

R

typeName

The name of the type of data the column contains.

Type

string

Access

R

value

The value of the data in the column, in the format in which the data was originally retrieved.

Type

various

Access

R/W

ColumnInfo

This generic JavaScript object contains basic information about a column of data. It is returned by the `getColumnList` method of the `Connection` object. See also the `Column` object.

ColumnInfo properties

name

A string that represents the identifying name of a column. This string can be used in a call to the `getColumn` method of the `Statement` object identify the associated column.

Type

string

Access

R

description

A string that contains database-dependent information about the column.

Type

string

Access

R

type

A numeric value identifying one of the `ADBC SQL Types` that applies to the data contained in the column associated with the `ColumnInfo` object.

Type

number

Access

R

typeName

A string identifying the type of the data contained in the associated column. It is not one of the `SQL Types` (see `type` above), but a database-dependent string representing the data type. This property may give useful information about user-defined data types.

Type

string

Access

R

Connection

5.0			✗

This object encapsulates a session with a database. Connection objects are returned by `ADBC.newConnection`. See also the `ADBC` object, `Statement` object, `Column` object, `ColumnInfo` object, `Row` object, and `TableInfo` object.

Connection methods

close

6.0			✗

Closes an active connection and invalidates all the objects created from the connection.

getColumnList

5.0			✗

Gets information about the various columns in the table

Parameters

`cName`	The name of the table to get column information about.

Returns

An array of `ColumnInfo` objects. This method never fails but may return a zero-length array.

Example

Given the Connection object `con`, get a list of all column names.

```
var con = ADBC.newConnection("q32000data");
var columnInfo = con.getColumnList("sales");
console.println("Column Information");
for (var i = 0; i < columnInfo.length; i++) {
   console.println(columnInfo[i].name);
   console.println("Description: "+ columnInfo[i].description);
}
```

getTableList

5.0			✗

Gets information about the various tables in a database.

Returns

It returns an array of `TableInfo` objects. This method never fails but may return a zero-length array.

Example

Assuming a `Connection` object `con` has been obtained (see `getColumnList` and `newConnection`), get the list of tables.

```
var tableInfo = con.getTableList();
console.println("A list of all tables in the database.");
for (var i = 0; i < tableInfo.length; i++) {
   console.println("Table name: "+ tableInfo[i].name);
   console.println("Description: "+ tableInfo[i].description);
}
```

newStatement

5.0			✗

Creates a `Statement` object through which database operations may be performed.

Returns

A `Statement` object on success or `null` on failure.

Example

Get a connection, and acquire a Statement object.

```
// Get a connection object
var con = ADBC.newConnection("q32000data");
// Now get a statement object
var statement = con.newStatement();
var msg = (statement == null) ?
   "Failed to obtain newStatement!" : "newStatement Object obtained!";
console.println(msg);
```

console

The `console` object is a static object that enables access to the JavaScript console for executing JavaScript and displaying debug messages.

This object does not function in Adobe Reader versions earlier than 7.0. Beginning with version 7.0, Adobe Reader has a console window. Its primary function is to report errors and messages. This capability is controlled by the JavaScript preference Show Console on Errors and Messages. Though the console is not interactive, the methods of the `console` object function as they do in Acrobat Professional and Acrobat Standard.

The debugging capability of the JavaScript Debugging window can be made available for Adobe Reader for the Windows and Mac OS platforms. To debug within Adobe Reader, the JavaScript file debugger.js must be installed and the Windows registry must be edited appropriately. See *Developing Acrobat Applications Using JavaScript* for technical details.

See also the dbg object.

console methods

clear

3.01			

Clears the console windows buffer of any output.

hide

4.0			

Closes the console window.

println

3.01			

Prints a string value to the console window with an accompanying carriage return.

Parameters

`cMessage`	A string message to print.

Example 1

This example prints the value of a field to the console window. The script could be executed during a mouse-up event.

```
var f = this.getField("myText");
console.clear(); console.show();
console.println("Field value = " + f.value);
```

Example 2

The console can be used as a debugging tool. For example, you can write values of variables to the console. The following script is at the document level:

```
var debugIsOn = true;
function myFunction ( n, m )
{
   if (debugIsOn)
   {
      console.println("Entering function: myFunction");
      console.println(" Parameter 1: n = " + n);
      console.println(" Parameter 2: m = " + m);
   }
   ....
   ....
   if (debugIsOn) console.println(" Return value: rtn = " + rtn);
   return rtn;
}
```

Beginning with Acrobat 6.0, debugging can also be accomplished with the JavaScript Debugger. See the dbg object.

show

3.01			

Shows the console window.

Example

Clear and show the console window:

```
console.clear();
console.show();
```

Data

5.0			

The Data object is the representation of an embedded file or data stream that is stored in the document. See the *PDF Reference* version 1.7 for details.

Using Data objects is a good way to associate and embed source files, metadata, and other associated data with a document. Data objects can be inserted from the external file system, queried, and extracted.

See the following Doc properties and methods:

`createDataObject`, `dataObjects`, `exportDataObject`, `getDataObject`, `importDataObject`, `removeDataObject`, `openDataObject`, `getDataObjectContents`, and `setDataObjectContents`.

Note: The Data object methods were implemented in Acrobat 5.0. However, the ability to use them in Adobe Reader with additional usage rights only became available in Adobe Reader 6.0.

Data properties

creationDate

The creation date of the file that was embedded.

Type

Date

Access

R

description

7.0.5			

The description associated with this data object.

Type

String

Access

R/W

MIMEType

The MIME type associated with this data object.

Type

String

Access

R

modDate

The modification date of the file that was embedded.

Type

Date

Access

R

name

The name associated with this data object.

Type

String

Access

R

Example

Display the names of file attachments to this document.

```
console.println("Dumping all data objects in the document.");
var d = this.dataObjects;
for (var i = 0; i < d.length; i++)
   console.println("DataObject[" + i + "]=" + d[i].name);
```

path

The file name and extension of the file that was embedded.

Type

String

Access

R

size

The size, in bytes, of the uncompressed data object.

Type

Number

Access

R

DataSourceInfo

This generic JavaScript object contains basic information about a database. The `ADBC.getDataSourceList` method returns an array of these objects.

DataSourceInfo properties

name

A string that represents the identifying name of a database. This string can be passed to `newConnection` to establish a connection to the database that the `DataSourceInfo` object is associated with.

Type

String

Access

R

description

A string that contains database-dependent information about the database.

Type

String

Access

R

dbg

The `dbg` object is a static object that can be used to control the JavaScript Debugger from a command-line console. Its methods provide the same functionality as the buttons in the JavaScript Debugger dialog box toolbar. In addition, breakpoints can be created, deleted, and inspected using the `dbg` object.

The `dbg` object and the JavaScript Debugger are only available in Acrobat Professional.

Note: If the viewer locks up during a debugging session, pressing Esc may resolve the problem.

Debugging is not possible with a modal dialog box open; for example, when debugging a batch sequence.

Debugging a script with a running event initiated by either `app.setInterval` or `app.setTimeOut` may cause recurring alert boxes to appear. Use Esc after the modal dialog box is dismissed to resolve the problem.

(Acrobat 7.0) While the Debugger is open and a debugging session is under way, the Acrobat application is unavailable.

dbg properties

bps

6.0			P

An array of *breakpoint generic objects* corresponding to breakpoints set in the debugger. This object contains the following properties and methods.

Property	Type	Access	Description
`fileName`	string	R	A string that identifies the script in the debugger.
`condition`	string	R	A JavaScript expression evaluated by the debugger to decide to whether to stop at a breakpoint. Used to create conditional breakpoints. The default value for this property is the string “true”.
`lineNum`	number	R	The line number in the script for which the breakpoint is set.

Method	Parameters	Returns	Description
`toString`	none	String	A string describing the breakpoint.

Type

Array

Access

R

Example

List all currently active breakpoints.

```
var db = dbg.bps
for ( var i = 0; i < db.length; i++ )
{
   for ( var o in db[i] ) console.println(o + ": " + db[i][o]);
   console.println("-----------------------------------");
}
```

See sb for another example of usage.

dbg methods

c

6.0			P

The c (continue) method resumes execution of a program stopped in the debugger. The JavaScript program may either stop again, depending on where the breakpoints are set, or reach execution end.

cb

6.0	D		P

The cb (clear breakpoint) method clears a breakpoint in the debugger. The dbg.cb method dirties the document only if breakpoints are stored in the document, as set through the user preferences, Edit > Preferences > JavaScript.

Parameters

fileName	The name of the script from where the breakpoint is going to be deleted.
lineNum	The line number for the breakpoint that is going to be cleared in the script.

q

6.0			P

The q (quit) method quits debugging and executing the current JavaScript. It additionally dismisses the debugger dialog box.

sb

6.0	D		P

The `sb` (set breakpoint) method sets a new breakpoint in the debugger. The `dbg.sb` method dirties the document only if breakpoints are stored in the document, as set through the user preferences, Edit > Preferences > JavaScript.

Parameters

`fileName`	The name of the script where the breakpoint is to be set.
`lineNum`	The line number in the script to create the breakpoint.
`condition`	(optional) a JavaScript expression to be evaluated when the debugger reaches the breakpoint. If the expression evaluates to `true`, the debugger stops at the breakpoint. If the expression evaluates to `false`, the debugger continues executing the script and does not stop at the breakpoint. The default value is `true`.

Example 1

Some script is run and an exception is thrown due to some error. A breakpoint is programmatically set using the information given in the error message.

```
SyntaxError: missing ; before statement 213:Document-Level: myDLJS
// now set a breakpoint using the console
dbg.sb({
   fileName: "Document-Level: myDLJS",
   lineNum: 213,
   condition: "true"
});
```

Example 2

Simulate the functionality of the Store Breakpoints in PDF File check box in the JavaScript user preferences.

```
// Save breakpoints in PDF file
this.addScript("myBreakpoints", "var myBPS = " + dbg.bps.toSource());

// Now reset the breakpoints
for ( var i = 0; i < myBPS.length; i++ ) dbg.sb( myBPS[i] );
```

Example 3

Set a conditional break. Consider the following code, which is a mouse-up action.

```
for (var i=0; i<100; i++)
   myFunction(i);             // defined at document level

// In the console, set a conditional break. Here, we break when the
// index of the loop is greater than 30.
dbg.sb({
   fileName:"AcroForm:Button1:Annot1:MouseUp:Action1",
   lineNum:2,
   condition:"i > 30"
})
```

si

6.0			P

The `si` (step in) method advances the program pointer to the next instruction in the JavaScript program, entering each function call for which there is a script defined. (Native JavaScript calls cannot be stepped into.)

sn

6.0			P

The `sn` (step instruction) method advances the program pointer to the next bytecode in the JavaScript program. (Each JavaScript instruction is made up of several bytecodes as defined by the JavaScript interpreter.)

so

6.0			P

The `so` (step out) method executes the program until it exits the current function. Execution stops at the instruction immediately following the call to the current function. If the scope currently under debug is the top-level scope, the program either continues executing until it ends or stops again when it reaches a breakpoint.

sv

6.0			P

The `sv` (step over) method advances the program pointer to the next instruction in the JavaScript program. If a function call is encountered, the debugger does not step into the instructions defined inside that function.

Dialog

An instance of this object is passed as a parameter to dialog box handlers (see "Dialog box handlers" on page 108). These handlers include the `initialize`, `validate`, `commit`, `destroy` and *ItemID* methods of the dialog box descriptor object literal that is passed to `app.execDialog`. The Dialog object allows the current state of the Dialog to be queried and set.

Dialog methods

enable

7.0			

Enables or disables various dialog box elements using the object literal passed in.

Typically, `enable` is called in the `initialize` method (see "Dialog box handlers" on page 108) of the object literal passed to `app.execDialog` to preset whether various dialog box elements are enabled or not.

Parameters

object literal	For each dialog box item to modify, there should be an entry in the object literal with the Dialog *ItemID* as the label and a Boolean value as the value indicating if it is enabled or not.

Example

See the examples following `app.execDialog`.

end

7.0			

Terminates a currently executing dialog box (as if the Cancel button had been pressed). This method takes an optional parameter of the *ItemID*, a string, of the dialog box element that will be reported as dismissing the dialog. This *ItemID* will be the return value of the `app.execDialog` call that created the dialog.

Parameters

String	(optional) The *ItemID* of the dialog box element that will be reported as dismissing the dialog.

Example

See the examples following `app.execDialog`.

load

7.0			

Sets the values of dialog box elements using the object literal passed in. Dialog box items are identified by an *ItemID* which is a unique 4-character string.

Typically, `load` is called in the `initialize` method (see "Dialog box handlers" on page 108) of the object literal passed to `app.execDialog` to preset the value of various dialog box elements.

Parameters

object literal	For each dialog box item to be modified, there should be an entry in the object literal with the *ItemID* as the label and the dialog box element setting as the contents. If the dialog box element takes multiple values (for example, a `list_box` or a `popup`), the value should be an object literal consisting of the displayed entry as the label and a numeric value as the contents. Similarly, if the dialog box element is hierarchical in nature (for example, a `hier_list_box`), the value should be a set of nested object literals. If the numeric value is greater than 0, the item is selected, otherwise it is not selected.

Example

See the examples following `app.execDialog`.

store

7.0			

Gets the values of dialog box elements as an object literal returned. Dialog box items are identified by an *ItemID*, which is a unique 4-character string. For each dialog box element, there will be an entry in the object literal with the *ItemID* as the label and the dialog box element setting as the contents. If the dialog box element takes multiple values (for example, a `list_box` or a `popup`), the value should be an object literal consisting of the displayed entry as the label and a numeric value as the contents. If the numeric value is greater than 0, the item was selected, otherwise it was not selected.

Typically, `store` is called in the `commit` method (see "Dialog box handlers" on page 108) of the object literal passed to `app.execDialog` to extract the value of various dialog box elements.

Returns

object literal

DirConnection

6.0		S	

This object represents an open connection to a directory: a repository of user information, including public-key certificates. Directory connections are opened using the `Directory` object `connect` method. A directory with a particular name can have more than one connection open at a time. All DirConnection objects must support all properties and methods listed here, unless otherwise specified.

Note: This object can only be obtained from a `Directory` object and is thus governed by the security restrictions of the `Directory` object. The `DirConnection` object is therefore available only for batch, console and application initialization, including in Adobe Reader. See also "Privileged versus non-privileged context" on page 32.

DirConnection properties

canList

6.0		S	

Indicates whether the directory connection is capable of listing all of its entries. Some directories may contain too many entries for this operation to be practical.

Type

Boolean

Access

R

Example

The AAB directory allows listing of the local trusted identity list.

```
var sh = security.getHandler( "Adobe.AAB" );
var dc = sh.directories[0].connect();
console.println( "CanList = " + dc.canList );
```

canDoCustomSearch

6.0		S	

Specifies whether the directory connection supports searching using directory-specific search parameter attributes. For example, directory-specific attributes for an LDAP directory include o (organization), c (country), cn (common name), givenname, sn (surname), uid, st, postalcode, mail, and telephonenumber.

Type

Boolean

Access

R

canDoCustomUISearch

6.0		S	

Specifies whether the directory connection supports searching using its own custom user interface to collect the search parameters.

Type

Boolean

Access

R

canDoStandardSearch

6.0		S	

Specifies whether the directory connection supports search using standard search parameter attributes. The standard attributes are

```
firstName
lastName
fullName
email
certificates
```

Some directory database implementations may not support these attributes, but directory handlers are free to translate these attributes to names understood by the directory.

Type

Boolean

Access

R

groups

6.0		S	

An array of language-dependent names for groups that are available through this connection.

Type

Array

Access

R

name

6.0		S	

The language-independent name of the directory that this object is connected to. An example of this would be `Adobe.PPKMS.ADSI.dir0`. All `DirConnection` objects must support this property.

Type

String

Access

R

uiName

6.0		S	

The language-dependent string of the directory this object is connected to. This string is suitable for user interfaces. All `DirConnection` objects must support this property.

Type

String

Access

R

DirConnection methods

search

6.0		S	

Searches the directory and returns an array of UserEntity objects that match the search parameters. A `UserEntity` object is a generic object that contains properties for all attributes that were requested by the `setOutputFields` method. If the `setOutputFields` method is not called prior to a search, it would return a `UserEntity` object containing no entries.

Parameters

`oParams`	(optional) A generic object containing an array of key-value pairs consisting of search attribute names and their corresponding strings. If `oParams` is not provided and `canList` is `true` for this directory, all entries in the directory will be returned. If `oParams` is not provided and `canList` is `false`, an exception occurs.
`cGroupName`	(optional) The name of a group (not to be confused with `Group` objects). If specified, the search will be restricted to this group.
`bCustom`	(optional) If `false` (the default), `oParams` contains standard search attributes. If `true`, `oParams` contains directory-specific search parameters. If the `canDoCustomSearch` property is not `true`, an exception occurs.
`bUI`	(optional) If `true`, the handler displays the user interface to allow collection of search parameters. The results of the search are returned by this method. `canDoCustomUISearch` must also be `true` if `bUI` is `true`, or an exception will occur. If `bUI` is specified, `bCustom` must also be specified, though its value is ignored.

Returns

An array of `UserEntity` objects.

Example 1

Directory search.

```
var sh = security.getHandler( "Adobe.PPKMS" );
var dc= sh.directories[0].connect();
dc.setOutputFields( {oFields:["certificates","email"]} )
var retVal = dc.search({oParams:{lastName:"Smith"}});
if( retVal.length )
console.println( retVal[0].email );
```

Example 2

List all entries in a local Acrobat Address Book. The script searches the directory and returns an array of users, along with their certificate information.

```
var sh = security.getHandler( "Adobe.AAB" );
var dc = sh.directories[0].connect();
if( dc.canList ) {
   var x = dc.search();
   for( j=0; j<x.length; ++j ) {
      console.println("Entry[" + j + "] = " + x[j].fullName + ":");
      for(i in x[j]) console.println("  " + i + " = " + x[j][i]);
   }
}
```

UserEntity object

A generic JavaScript object that describes a user in a directory and the user's associated certificates. It contains standard properties that have a specific meaning for all directory handlers. Directory handlers translate these entries to the ones that are specific to them when required. An array of these objects is returned by the `search` method of the `DirConnection` object.

It has the following properties

Property	Type	Access	Description
`firstName`	String	R/W	The first name of the user.
`lastName`	String	R/W	The last name of the user.
`fullName`	String	R/W	The full name of the user.
`certificates`	Array of `Certificate` objects	R/W	An array of certificates that belong to this user. To find a certificate that is to be used for a particular use, the caller should inspect the certificate's `keyUsage` property.
`defaultEncryptCert`	Array of `Certificate` objects	R/W	The preferred certificate to use when encrypting documents for this user entity. Routines that process user entity objects will look first to this property when choosing an encryption certificate. If this property is not set, the first valid match in the certificates property will be used.

setOutputFields

6.0		S	X

Defines the list of attributes that should be returned when executing the `search` method.

Note: This method is not supported by the Adobe.AAB directory handler. Custom options are not supported by the Adobe.PPKMS.ADSI directory handler.

Parameters

`oFields`	An array of strings containing the names of attributes that should be returned from the directory when calling the search method. The names in this array must either be names of standard attributes that can be used for all directory handlers or custom attributes that are defined for a particular directory. The standard attributes are the property names defined for the `UserEntity` object. Directory handlers can, when needed, translate standard attribute names to names that it understands.
`bCustom`	(optional) A Boolean value indicating that the names in oFields are standard output attribute names. If `true`, the names represent directory-specific attributes that are defined for a particular directory handler. The default is `false`.

Returns

An array of strings, containing the names of attributes from `oFields` that are not supported by this directory. An empty array is returned if the `oFields` array is empty.

Example

In this example, `dc.setOutputFields` returns the array of strings `["x", "y"]`.

```
var sh = security.getHandler("Adobe.PPKMS");
var dc = sh.directories[0].connect();
var w = dc.setOutputFields( [ "certificates", "email", "x", "y"] );
console.println( w );
```

See also the examples that follow the `DirConnection.search` method.

Directory

6.0		S	

Directories are a repository of user information, including public-key certificates. Directory objects provide directory access and are obtained using the `directories` property or the `newDirectory` method of the `SecurityHandler` object.

Acrobat 6.0 and later provides several directories. The Adobe.AAB Security Handler has a single directory named Adobe.AAB.AAB. This directory provides access to the local Acrobat Address Book, also called the *trusted identity store*. On Windows, the Adobe.PPKMS Security Handler provides access through the Microsoft Active Directory Script Interface (ADSI) to as many directories as have been created by the user. These directories are created sequentially with names `Adobe.PPKMS.ADSI.dir0`, `Adobe.PPKMS.ADSI.dir1`, and so on.

Note: This object can only be obtained from a `SecurityHandler` object and is thus governed by the security restrictions of the `SecurityHandler` object. The Directory object is therefore available only for batch, console and application initialization, including in Adobe Reader. See also "Privileged versus non-privileged context" on page 32.

Directory properties

info

6.0		S	

The value of this property is a `DirectoryInformation` object, a generic object used to set and get the properties for this `Directory` object.

Type

Object

Access

R/W

Example

```
// Create and activate a new directory
var oDirInfo = { dirStdEntryID: "dir0",
   dirStdEntryName: "Employee LDAP Directory",
   dirStdEntryPrefDirHandlerID: "Adobe.PPKMS.ADSI",
   dirStdEntryDirType: "LDAP",
   server: "ldap0.example.com",
   port: 389 };
var sh = security.getHandler( "Adobe.PPKMS" );
var newDir = sh.newDirectory();
newDir.info = oDirInfo;
```

DirectoryInformation object

A directory information object is a generic object representing the properties for a directory and has the following standard properties.

Property	Type	Access	Required	Description
`dirStdEntryID`	String	R/W	Yes	A unique, language-independent name for the directory. Must be alphanumeric and can include underscores, periods and hyphens. For new directory objects, it is suggested that the ID not be provided, in which case a new unique name will be automatically generated.
`dirStdEntryName`	String	R/W	Yes	A user-friendly name for the directory.
`dirStdEntryPrefDirHandlerID`	String	R/W	No	The name of the directory handler to be used by this directory. Security handlers can support multiple directory handlers for multiple directory types (for example, local directories and LDAP directories).
`dirStdEntryDirType`	String	R/W	No	The type of directory. Examples of this are LDAP, ADSI, and WINNT.
`dirStdEntryVersion`	String	R	No	The version of the data. The default value is 0 if this is not set by the directory. The value for Acrobat 6.0 directories for the Adobe.AAB and Adobe.PPKMS.ADSI directory handlers is `0x00010000`.

Directory information objects can include additional properties that are specific to a particular directory handler. The Adobe.PPKMS.ADSI directory handler includes the following additional properties:

Property	Type	Access	Description
`server`	String	R/W	The server that hosts the data. For example, addresses.employees.example.com.
`port`	Number	R/W	The port number for the server. The standard LDAP port number is 389.

Property	Type	Access	Description
searchBase	String	R/W	Narrows the search to a particular section of the directory. An example of this is o=XYZ Systems,c=US.
maxNumEntries	Number	R/W	The maximum number of entries to be retrieved in a single search.
timeout	Number	R/W	The maximum time allowed for a search.

Example 1

Create and activate a new directory.

```
var oDirInfo = { dirStdEntryID: "dir0",
   dirStdEntryName: "Employee LDAP Directory",
   dirStdEntryPrefDirHandlerID: "Adobe.PPKMS.ADSI",
   dirStdEntryDirType: "LDAP",
   server: "ldap0.example.com",
   port: 389
};
var sh = security.getHandler( "Adobe.PPKMS" );
var newDir = sh.newDirectory();
newDir.info = oDirInfo;
```

Example 2

Get information for an existing directory.

```
var sh = security.getHandler("Adobe.PPKMS");
var dir0 = sh.directories[0];
// Get directory info object just once for efficiency
var dir0Info = dir0.info;
console.println( "Directory " + dir0Info.dirStdEntryName );
console.println( "address " + dir0Info.server + ":" + dir0Info.port );
```

Directory methods

connect

6.0		S	

Returns a DirConnection object that is a connection to the directory with the specified name. There can be more than one active connection for a directory.

See also the DirConnection object and the SecurityHandler object's directories property.

Parameters

`oParams`	(optional) A generic object that can contain parameters that are necessary to create the connection. Properties of this object are dependent on the particular directory handler and can include `userid` and `password`.
`bUI`	(optional) A Boolean value whose default is `false`. It specifies whether the directory handler can bring its UI, if required for establishing the connection.

Returns

A `DirConnection` object, or `null` if there is no directory with the specified name.

Example

Enumerate available directories and connect.

```
var sh = security.getHandler( "Adobe.PPKMS" );
var dirList = sh.directories;
for ( var i=0; i< dirList.length; i++)
   for ( var o in dirList[i].info )
      console.println( o + " = " + dirList[i].info[o]);
var dirConnection = dirList[0].connect();
```

Doc

This object provides the interface between a PDF document open in the viewer and the JavaScript interpreter. It provides methods and properties for accessing the PDF document.

You can access the Doc object from JavaScript in a variety of ways:

- The `this` object usually points to the Doc object of the underlying document.
- Some properties and methods, such as `extractPages`, `app.activeDocs`, and `app. openDoc`, return the Doc object.
- The Doc object can often be accessed through `event` objects, which are created for each event by which a JavaScript is executed:
  - For `mouse`, `focus`, `blur`, `calculate`, `validate`, and `format` events, `event.target` returns the Field object that initiated the event. You can then access the Doc object through the Doc method of the Field object.
  - For all other events, `event.target` points to the Doc.

Example 1: Access through this object

Use `this` to get the number of pages in this document:

```
var nPages = this.numPages;
// Get the crop box for "this" document:
var aCrop = this.getPageBox();
```

Example 2: Access through return values

Return values from one document to open, modify, save and close another.

```
// Path relative to "this" doc:
var myDoc = app.openDoc("myNovel.pdf", this);
myDoc.info.Title = "My Great Novel";
myDoc.saveAs(myDoc.path);
myDoc.closeDoc(true);
```

Example 3: Access through the event object.

For mouse, calculate, validate, format, focus, and blur events:

```
var myDoc = event.target.doc;
```

For all other events (for example, batch or console events):

```
var myDoc = event.target;
```

Doc properties

alternatePresentations

6.0			

References the document's `AlternatePresentation` object. If the functionality needed to display alternate presentations is not available, this property is `undefined`.

The `AlternatePresentation` object provides access to the document's alternate presentations. The PDF language extension specifies that each document can potentially have many named alternate presentations. Each alternate presentation with a known `type` will have a corresponding `alternatePresentations` property in the document. This property should have the same name as its alternate presentation and should reference its alternate presentation's `AlternatePresentation` object. If there are no recognized alternate presentations in the document, this object is empty (does not have any properties).

The *PDF Reference*, version 1.7 provides details on alternate presentations.

Note: For compatibility with the current implementation, the alternate presentation name must be an ASCII string. The only alternate presentation type currently implemented is “SlideShow”.

See the `AlternatePresentation` object for properties and methods that can be used to control an alternate presentation.

Type

Object | undefined

Access

R

Example 1

Test whether the `AlternatePresentation` object is present:

```
if( typeof this.alternatePresentations != "undefined" )
{
   // Assume AlternatePresentations are present
   // List the names of all alternate presentations in the doc
   for ( var ap in this.alternatePresentations ) console.println(ap);
}
```

Example 2

Get the slide show named `MySlideShow` and start the show.

```
// oMySlideShow is an AlternatePresentation object
oMySlideShow = this.alternatePresentations["MySlideShow"];
oMySlideShow.start();
```

author

X	D		

Note: This property has been superseded by the `info` property.

The author of the document.

Type

String

Access

R/W (Adobe Reader: R only)

baseURL

5.0	D		

The base URL for the document is used to resolve relative web links within the document. See also `URL`.

Type

String

Access

R/W

Example

Set the base URL and creates a link to go to a page relative to the base URL.

```
console.println("Base URL was " + this.baseURL);
this.baseURL = "http://www.adobe.com/products/";
console.println("Base URL is " + this.baseURL);
// Add a link to the first page
var link = this.addLink(0, [200,200, 400, 300])
// Set an action that goes to the Acrobat page on the Adobe website.
link.setAction("this.getURL('Acrobat',false)")
```

bookmarkRoot

5.0			

The root bookmark for the bookmark tree. This bookmark is not displayed to the user but is a programmatic construct used to access the tree and the child bookmarks.

Type

Object

Access

R

Example

See the Bookmark object for an example.

calculate

4.0			

If `true` (the default value), calculations can be performed for this document. If `false`, calculations cannot be performed for this document. This property supersedes the `app.calculate property`, whose use is now discouraged.

Type

Boolean

Access

R/W

creationDate

✖			

Note: This property has been superseded by the `info` property.

The document's creation date.

Type

Date

Access

R

creator

✗			

Note: This property has been superseded by the `info` property.

The creator of the document (for example, "Adobe FrameMaker" or "Adobe PageMaker").

Type

String

Access

R

dataObjects

5.0			

An array containing all the named `Data` objects in the document.

Related properties and methods are `openDataObject`, `getDataObject`, `createDataObject`, `importDataObject`, `removeDataObject`, `getDataObjectContents`, and `setDataObjectContents`.

Type

Array

Access

R

Example

List all embedded files in the document.

```
var d = this.dataObjects;
for (var i = 0; i < d.length; i++)
   console.println("Data Object[" + i + "]=" + d[i].name);
```

delay

4.0			

This property can delay the redrawing of any appearance changes to every field in the document. It is generally used to buffer a series of changes to fields before requesting that the fields regenerate their appearance. If `true`, all changes are queued until `delay` is reset to `false`, at which time all the fields on the page are redrawn.

See also the Field object `delay` property.

Type

Boolean

Access

R/W

dirty

3.01	D		X

Specifies whether the document needs to be saved as the result of a changes to the document. It is useful to reset the `dirty` flag when performing changes that do not warrant saving, such as updating a status field.

Note: If the document is temporary or newly created, setting `dirty` to `false` has no effect. That is, the user is still asked to save changes before closing the document. See `requiresFullSave`.

Type

Boolean

Access

R/W

Example 1

Reset a form and sets `dirty` to `false`. After the reset, the user can close the document without having to dismiss a Save dialog box.

```
var f = this.getField("MsgField");
f.value = "You have made too many mistakes, I'm resetting the form. "
   + "Start over, this time follow the directions!";
this.resetForm();
this.dirty = false;
```

Example 2

Fill a text field to instruct the user to complete the form. The script is constructed so that populating the field does not change the save state of the document.

```
var f = this.getField("MsgField");
var b = this.dirty;
f.value = "Please fill in the fields below.";
this.dirty = b;
```

disclosed

5.05		S	

Specifies whether the document should be accessible to JavaScript scripts in other documents.

The `app.openDoc` and `app.activeDocs` methods check the `disclosed` property of the document before returning its Doc.

Note: The `disclosed` property can only be set during batch, console, Page/Open and Doc/Open events. See the `event` object for a discussion of JavaScript events. See also "Privileged versus non-privileged context" on page 32.

Type

Boolean

Access

R/W

Example 1

A document can be disclosed to others by placing the code at the document level (or as a page open action) at the top level:

```
this.disclosed = true;
```

Example 2

The following code can be used in an Execute JavaScript Batch Sequence to disclose all selected documents.

```
this.addScript("Disclosed", "this.disclosed = true;");
```

docID

6.0			

An array of two strings in hex-encoded binary format. The first string is a permanent identifier based on the contents of the file at the time it was originally created; it does not change when the file is incrementally updated. The second string is a changing identifier based on the file's contents at the time it was last updated. These identifiers are defined by the optional `ID` entry in a PDF file's trailer dictionary. (See the *PDF Reference* version 1.7.)

Type

Array

Access

R

See "Example 6 (Acrobat 7.0)" on page 349 for an example of usage.

documentFileName

6.0			

The base file name, with extension, of the document referenced by the Doc. The device-independent path is not returned. See also the `path` and `URL` properties. The file size of the document can be obtained from the `filesize` property.

Type

String

Access

R

Example

Get the document file name.

```
console.println('"The file name of this document is '
  + this.documentFileName +'."');
```

Executing the script on this document, the *JavaScript for Acrobat API Reference*, yields the following statement:

```
"The file name of this document is js_api_reference.pdf"
```

dynamicXFAForm

7.0			

Returns `true` if the document is a dynamic XFA form and `false` otherwise.

A dynamic XFA form is one in which some of the fields can grow or shrink in size to accommodate the values they contain.

Type

Boolean

Access

R

Example

See the XFA object for an example of usage.

external

4.0			

Specifies whether the current document is being viewed in the Acrobat application or in an external window (such as a web browser).

Type

Boolean

Access

R

Example

Detect whether this document is in a browser or not.

```
if ( this.external )
{
   // Viewing from a browser
}
else
{
   // Viewing in the Acrobat application.
}
```

filesize

3.01			

The file size of the document in bytes.

Type

Integer

Access

R

Example (Acrobat 5.0)

Get a readout of the difference in file sizes before and after saving a document:

```
// Add the following code to the "Document Will Save" section
var filesizeBeforeSave = this.filesize
console.println("File size before saving is " + filesizeBeforeSave);

// Add the following code to the "Document Did Save" section
var filesizeAfterSave = this.filesize
console.println("File size after saving is " + filesizeAfterSave);
var difference = filesizeAfterSave - filesizeBeforeSave;
console.println("The difference is " + difference );
if ( difference < 0 )
   console.println("Reduced filesize!");
else
   console.println("Increased filesize!");
```

hidden

7.0			

This property is `true` if the document's window is hidden. A window may be hidden, for example, because it is being operated on in batch mode or if it was explicitly opened hidden. The `openDataObject` and `app.openDoc` methods can be used to open a document with a hidden window.

Type

Boolean

Access

R

Example

Open a document and verify its hidden status.

```
oDoc = app.openDoc({
   cPath:"/C/myDocs/myHidden.pdf",
   bHidden: true
});
console.println("It is " + oDoc.hidden + " that this document hidden.");
oDoc.closeDoc();
```

hostContainer

7.0.5			

An instance of the `HostContainer` object if the PDF document is embedded in another container such as a web browser, otherwise undefined.

Note: This property is not implemented on the Mac OS platform.

Type

Object

Access

R/W

icons

5.0			

An array of named `Icon` objects that are present in the document-level named icons tree. If there are no named icons in the document, the property has a value of `null`.

See also `addIcon`, `getIcon`, `importIcon`, `removeIcon`, the Field object properties `buttonGetIcon`, `buttonImportIcon`, `buttonSetIcon`, and the `Icon` object.

Type

Array | `null`

Access

R

Example 1

Report the number of named icons in the current document.

```
if (this.icons == null)
   console.println("No named icons in this doc");
else
   console.println("There are " + this.icons.length
      + " named icons in this doc");
```

Example 2

List all named icons the current document.

```
for (var i = 0; i < this.icons.length; i++) {
   console.println("icon[" + i + "]=" + this.icons[i].name);
}
```

info

5.0	D		

Specifies an object with properties from the document information dictionary in the PDF file. (See the *PDF Reference* version 1.7.) Standard entries are:

```
Title
Author
Subject
Keywords
Creator
Producer
CreationDate
ModDate
Trapped
```

For Acrobat, properties of this object are writeable and setting a property dirties the document. Additional document information fields can be added by setting non-standard properties.

In Adobe Reader, writing to any property in this object throws an exception.

Note: Standard entries are case insensitive, that is, `info.Keywords` is the same as `info.keywords`.

Type

Object

Access

R/W (Adobe Reader: R only)

Example 1

Get the title of the current document.

```
var docTitle = this.info.Title;
```

Example 2

Get information about the document.

```
this.info.Title = "JavaScript, The Definitive Guide";
this.info.ISBN = "1-56592-234-4";
this.info.PublishDate = new Date();
for (var i in this.info)
   console.println(i + ": "+ this.info[i]);
```

The above script could produce the following output:

```
CreationDate: Mon Jun 12 14:54:09 GMT-0500 (Central Daylight Time) 2000
Producer: Acrobat Distiller 4.05 for Windows
Title: JavaScript, The Definitive Guide
Creator: FrameMaker 5.5.6p145
ModDate: Wed Jun 21 17:07:22 GMT-0500 (Central Daylight Time) 2000
SavedBy: Adobe Acrobat 4.0 Jun 19 2000
PublishDate: Tue Aug 8 10:49:44 GMT-0500 (Central Daylight Time) 2000
ISBN: 1-56592-234-4
```

innerAppWindowRect

6.0			

This property returns an array of screen coordinates (a rectangle) for the Acrobat inner application window. This rectangle does not include items such as the title bar and resizing border, which are part of the outer rectangle of the application window.

Type

Array of Numbers

Access

R

Example

Read back to the console the Acrobat inner application window.

```
var coords = this.innerAppWindowRect;
console.println(coords.toSource())
// Possible output: [115, 154, 1307, 990]
```

See also innerDocWindowRect, outerAppWindowRect and outerDocWindowRect.

innerDocWindowRect

6.0			

This property returns an array of screen coordinates (a rectangle) for the Acrobat inner document window. This rectangle does not include items such as the title bar and resizing border, which are part of the outer rectangle of the document window.

The document and application rectangles may differ on different platforms. For example, on Windows, the document window is always inside the application window; on Mac OS, they are the same.

Type

Array of Numbers

Access

R

See also `innerAppWindowRect`, `outerAppWindowRect`, `outerDocWindowRect`, and `pageWindowRect`.

isModal

7.0.5			

A Boolean value indicating whether the document is currently in a modal state (for example, displaying a modal dialog box using `app.execDialog`).

Type

Object

Access

R

keywords

X	D		

Note: This property has been superseded by the `info` property.

The keywords that describe the document (for example, “forms”, “taxes”, “government”).

Type

Object

Access

R/W (Adobe Reader: R only)

layout

5.0			

Changes the page layout of the current document. Valid values are:

```
SinglePage
OneColumn
TwoColumnLeft
TwoColumnRight
```

In Acrobat 6.0 and later, there are two additional properties:

```
TwoPageLeft
TwoPageRight
```

Type

String

Access

R/W

Example

Put the document into a continuous facing layout where the first page of the document appears in the left column:

```
this.layout = "TwoColumnLeft";
```

media

6.0			

An object that contains multimedia properties and methods for the document. The properties and methods are described under the `Doc.media` object.

Type

`Doc.media` object

Access

R/W

metadata

6.0	D		X

Allows you to access the XMP metadata embedded in a PDF document. Returns a string containing the metadata as XML. For information on embedded XMP metadata, see the *PDF Reference*, version 1.7.

Type

String

Access

R/W

Exceptions

`RaiseError` is thrown if setting metadata to a string not in XMP format.

Example 1

Try to create metadata not in XMP format.

```
this.metadata = "this is my metadata";
RaiseError: The given metadata was not in the XMP format
Global.metadata:1:Console undefined:Exec
 ===> The given metadata was not in the XMP format
```

Example 2

Create a PDF report file with metadata from a document.

```
var r = new Report();
r.writeText(this.metadata);
r.open("myMetadataReportFile");
```

Example 3

(Acrobat 8.0) This example illustrates how to use E4X to change the metadata of the document. The script sets the Copyright Status, the Copyright Notice and the Copyright Info URL fields. The script can be executed from the console or as a batch sequence.

```
var CopyrightStatus = "True";
var CopyrightNotice = "Copyright(C) 2006, Adobe Systems, Inc."
var CopyrightInfoURL = "http://www.adobe.com"
var meta = this.metadata;
var myXMPData = new XML(meta);
myx = new Namespace("adobe:ns:meta/");
myrdf = new Namespace("http://www.w3.org/1999/02/22-rdf-syntax-ns#");
mypdf = new Namespace("http://ns.adobe.com/pdf/1.3/");
myxap = new Namespace("http://ns.adobe.com/xap/1.0/");
mydc = new Namespace("http://purl.org/dc/elements/1.1/");
```

```
   myxapRights = new Namespace("http://ns.adobe.com/xap/1.0/rights/");
   var p = myXMPData.myrdf::RDF.myrdf::Description;
   /*
      We test whether this element has a value already, if no, we assign it a
      value, otherwise we assign it another value.
   */
   if (p.mydc::rights.myrdf::Alt.myrdf::li.toString() == "") {
      p[0] +=  <rdf:Description rdf:about=""
         xmlns:dc="http://purl.org/dc/elements/1.1/"
         xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#">
         <dc:rights>
            <rdf:Alt>
               <rdf:li xml:lang="x-default">
                  {CopyrightNotice}
               </rdf:li>
            </rdf:Alt>
         </dc:rights>
      </rdf:Description>
   } else
      p.mydc::rights.myrdf::Alt.myrdf::li = CopyrightNotice;
/*
   Some elements are converted into attributes, so we need to first test
   whether the xapRights:Marked attribute is present, if not, we add it in as an
   element; otherwise, if the attribute is present, we update the attribute.
   Acrobat changes certain elements into attributes; the xapRights:Marked and
   xapRights:WebStatement are two such examples, but dc:rights above is one
   that is not changed into an attribute.
*/
   if (p.@myxapRights::Marked.toString() == "" ) {
      p[0] +=  <rdf:Description rdf:about=""
         xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#"
         xmlns:xapRights="http://ns.adobe.com/xap/1.0/rights/">
         <xapRights:Marked>{CopyrightStatus}</xapRights:Marked>
         <xapRights:WebStatement>{CopyrightInfoURL}</xapRights:WebStatement>
      </rdf:Description>
   } else {
      p.@myxapRights::Marked = CopyrightStatus;
      p.@myxapRights::WebStatement = CopyrightInfoURL;
   }
// Convert myXMPData into a string
   myNewXMPStr=myXMPData.toXMLString();
// and assign it to the document metadata
   this.metadata = myNewXMPStr;
```

modDate

X			

Note: This property has been superseded by the `info` property.

The date the document was last modified.

Type

Date

Access

R

mouseX

7.0			

Gets the *x* coordinate of the mouse coordinates in default user space in relation to the current page.

Type

Number

Access

R

Example

Get the coordinates of the mouse as the user moves it around the viewer.

```
function getMouseCoor() {
   console.println( "("+this.mouseX+","+ this.mouseY+")" );
}
var ckMouse = app.setInterval("getMouseCoor()", 100);
var timeout = app.setTimeOut(
   "app.clearInterval(ckMouse); app.clearTimeOut(timeout)",2000);
```

mouseY

7.0			

Gets the *y* coordinate of the mouse coordinates in default user space in relation to the current page.

Type

Number

Access

R

noautocomplete

7.0			

This property can be used to turn off the auto-complete feature of Acrobat forms, for this document only:

- If `true`, no suggestions are made as the user enters data into a field.
- If `false`, auto-complete respects the user preference Forms > Auto-Complete.

Setting this property does not change the user's auto-complete preferences.

Initially, this property has a value of `undefined`.

Type

Boolean

Access

R/W

Example

The following script could be executed from an open page action or as a top-level document JavaScript. It turns off the auto-complete feature:

```
this.noautocomplete = true;
```

nocache

7.0			

This property is used to turn off forms data caching for this document only:

- If `true`, Acrobat is prevented from retaining forms data in an Internet browser
- If `false`, Acrobat respects the Forms user preference Keep Forms Data Temporarily Available on Disk

Note: The value of the `nocache` property does not affect the check box item Keep Forms Data Temporarily Available on Disk.

Before this property is set for the first time, it has a value of `undefined`.

Type

Boolean

Access

R/W

Example

The following script turns off caching of form data, so that sensitive data are not left on the local hard drive. It can be executed from an open page action or as a top-level document JavaScript.

```
this.nocache = true;
```

numFields

4.0			

The total number of fields in the document. See also `getNthFieldName`.

Type

Integer

Access

R

Example 1

```
console.println("There are " + this.numFields + " in this document");
```

Example 2

This script uses the `numFields` property and `getNthFieldName` method to loop through all fields in the document. All button fields are changed so that they have a beveled appearance (other modifications to the buttons of the document can also be made).

```
for ( var i = 0; i < this.numFields; i++) {
   var fname = this.getNthFieldName(i);
   if ( fname.type = "button" ) f.borderStyle = border.b;
}
```

numPages

3.01			

The number of pages in the document.

Type

Integer

Access

R

Example 1

```
console.println("There are " + this.numPages + " in this document");
```

Example 2

Delete the last page from the document. The (0-based) page number of the last page in the document is `this.numPages - 1`.

```
this.deletePages({ nStart: this.numPages - 1 });
```

numTemplates

X			

Note: This property has been superseded by `templates`.

The number of templates in the document.

Type

Integer

Access

R

path

3.01			

The device-independent path of the document, for example:

```
/c/Program Files/Adobe/Acrobat 5.0/Help/AcroHelp.pdf
```

Type

String

Access

R

The file name of the document can be acquired by the `documentFileName` property. See also the `URL` property.

outerAppWindowRect

6.0			

This property returns an array of screen coordinates (a rectangle) for the Acrobat outer application window. This rectangle includes items such as the title bar and resizing border, which are not part of the inner rectangle of the application window.

Type

Array of Numbers

Access

R

See also innerAppWindowRect, outerDocWindowRect, outerDocWindowRect, and pageWindowRect.

outerDocWindowRect

6.0			

This property returns an array of screen coordinates (a rectangle) for the Acrobat outer document window. This rectangle includes items such as the title bar and resizing border, which are not part of the inner rectangle of the document window.

The application and document rectangles may differ on different platforms. For example, on Windows, the document window is always inside the application window. In Mac OS, the windows are the same.

Type

Array of Numbers

Access

R

See also innerAppWindowRect, outerDocWindowRect, outerAppWindowRect, and pageWindowRect.

pageNum

3.01			

Gets or sets the current page of the document. When setting `pageNum` to a specific page, remember that the values are 0-based.

Type

Integer

Access

R/W

Example

Go to the first page of the document.

```
this.pageNum = 0;
```

Advance the document to the next page.

```
this.pageNum++;
```

pageWindowRect

6.0			

An array of screen coordinates (a rectangle) for the Acrobat page view window. The page view window is the area inside the inner document window in which the PDF content is displayed.

Type

Array of Numbers

Access

R

See also `innerAppWindowRect`, `outerDocWindowRect`, `outerAppWindowRect`, and `outerDocWindowRect`.

permStatusReady

6.0			

A Boolean value specifying whether the permissions for this document have been resolved.

When downloading over a network connection, `false` can indicate that the document is not available, in the case where permissions must be determined based on an certification signature that covers the entire document.

Type

Boolean

Access

R

producer

X			

Note: This property has been superseded by the `info` property.

The producer of the document (for example, "Acrobat Distiller®" or "PDFWriter").

Type

String

Access

R

requiresFullSave

7.0			

This property is `true` if the document requires a full save because it is temporary or newly created. Otherwise, it is `false`.

Type

Boolean

Access

R

Example

```
var oDoc = app.newDoc();
console.println("It is " + oDoc.requiresFullSave
   + " that this document requires a full save.");
```

securityHandler

5.0			

The name of the security handler used to encrypt the document. Returns `null` if there is no security handler (for example, the document is not encrypted).

Type

String

Access

R

Example

```
console.println(this.securityHandler != null ?
   "This document is encrypted with " + this.securityHandler
   + " security." : "This document is unencrypted.");
```

This script could print the following if the document was encrypted with the standard security handler.

```
This document is encrypted with Standard security.
```

selectedAnnots

5.0			C

An array of `Annotation` objects corresponding to all currently selected markup annotations.

See also `getAnnot` and `getAnnots`.

Type

Array

Access

R

Example

Show all the comments of selected annotations in the console.

```
var aAnnots = this.selectedAnnots;
for (var i=0; i < aAnnots.length; i++)
   console.println(aAnnots[i].contents);
```

sounds

5.0			

An array containing all of the named `Sound` objects in the document.

See also `getSound`, `importSound`, `deleteSound`, and the `Sound` object.

Type

Array

Access

R

Example

```
var s = this.sounds;
for (i = 0; i < s.length; i++)
   console.println("Sound[" + i + "]=" + s[i].name);
```

spellDictionaryOrder

5.0			

An array specifying the dictionary search order for this document. For example, the form designer of a medical form may want to specify a medical dictionary to be searched first before searching the user's preferred order.

The Spelling plug-in first searches for words in this array, then searches the dictionaries the user has selected on the Spelling Preference panel. The user's preferred order is available from `spell.dictionaryOrder`. An array of the currently installed dictionaries can be obtained using `spell.dictionaryNames`.

Note: When setting this property, an exception is thrown if any of the elements in the array is not a valid dictionary name.

Type

Array

Access

R/W

spellLanguageOrder

6.0			✖

An array specifying the language array search order for this document. The Spelling plug-in first searches for words in this array, then it searches the languages the user has selected on the Spelling Preferences panel. The user's preferred order is available from `spell.languageOrder`. An array of currently installed languages can be obtained using the `spell.languages` property.

Type

Array

Access

R/W

subject

X	D		

Note: This property has been superseded by the `info` property.

The document's subject. This property is read-only in Adobe Reader.

Type

String

Access

R/W

templates

5.0			

An array of all of the `Template` objects in the document. See also `createTemplate`, `getTemplate`, and `removeTemplate`.

Type

Array

Access

R

Example

List all templates in the document.

```
var t = this.templates
for ( var i=0; i < t.length; i++)
{
   var state = (t[i].hidden) ? "visible" : "hidden"
   console.println("Template: \"" + t[i].name
      + "\", current state: " + state);
}
```

title

✗	D		✗

Note: This property has been superseded by the `info` property.

The title of the document.

Type

String

Access

R/W (Adobe Reader: R only)

URL

5.0			

The document's URL. If the document is local, it returns a URL with a `file:///` scheme for Windows and UNIX and `file://localhost/` for Mac OS. This may be different from the `baseURL`.

Type

String

Access

R

See also the `path` and `documentFileName` properties.

viewState

7.0.5			

An opaque object representing the current view state of the document. The state includes, at minimum, information about the current page number, scroll position, zoom level, and field focus.

To set this value, you must use what was previously returned from a read of the value. It can be used to restore the view state of a document.

Note: The object is only defined within an embedded PDF.

Type

Object

Access

R/W

Example

This example gets the view state and sends it to the host application, which can store it and pass it back to the viewer later to restore the view to the original state. This code may be executed by a button in the PDF document. The first entry in the array signals the nature of the message to the host.

```
if(this.hostContainer)
{
   cVState = this.viewState.toSource();
   aMsg = new Array( "viewState", cVState );
   this.hostContainer.postMessage(aMsg);
}
```

In the host application, the message handler might have this form:

```
var cViewState=""; // Variable to save the viewState
function onMessageFunc( stringArray )
{
   var PDFObject = document.getElementById( PDFObjectID );
   if ( this != PDFObject.messageHandler )
      alert( "Incorrect this value in onMessage handler" );
   // The first entry in the encoming array is the signal
   var signal = stringArray[0];

   switch ( signal ) {
      case "Msg":
         var msgStr = "";
         for ( var i = 1; i < stringArray.length; i++ )
            msgStr += (stringArray[ i ] + "<br>");
         writeMsg( msgStr ); // A function to write to the document.
         break;

      case "viewState":
         // View state, let's save this
         cViewState = stringArray[1];
         break;
   }
}
```

You can post the value of `cViewState` back to the embedded PDF using a button. Within the document level JavaScript of the PDF, you might have,

```
if ( this.hostContainer )
{
   myHostContainer = this.hostContainer;
   myHostContainer.messageHandler = {
      onMessage: function(aMessage) {
         var f = this.doc.getField("msg4pdf");
         var strValue = "";
         var signal = aMessage[0];
         switch ( signal ) {
            case "Msg":
```

```
                for(var i = 1; i < aMessage.length; i++)
                   strValue += aMessage[i] + "\r";
                f.value = strValue;
                break;
             case "viewState":
                var restoreViewState = eval( aMessage[1] );
                // Reset the viewState, begin sure to acquire the correct
                // Doc as the doc property of this.
                this.doc.viewState = restoreViewState;
                break;
          }
       },
       onError: function(error, aMessage) {
            console.println("error: "+ error.toString())
        },
        onDisclose: HostContainerDisclosurePolicy.SameOriginPolicy,
        allowDeliverWhileDocIsModel: true
    };
    // The this object will be the messageHandler instance that the
    // method is being called on, so we save the Doc as a doc
    // property of the messageHandler instance.
    myHostContainer.messageHandler.doc = this;
}
```

xfa

6.0.2			

The property is defined only if the document is an XML form, that is, if the document was created in LiveCycle Designer. When defined, `xfa` is a static XFAObject, which is the root node of the underlying xfa model, and gives access to the xfa scripting object model (SOM).

Refer to the document *Adobe XML Form Object Model Reference* for details on the xfa SOM. The document *Converting Acrobat JavaScript for Use in LiveCycle Designer Forms* has a comparison between the Acrobat and LiveCycle Designer scripting object models.

Note: When executing this property from a folder level script, pass the Doc object from the document so that `xfa` will be executed in the proper context. See Example 2.

Type

XFAObject

Access

R

Example 1

Suppose this document is an XML form, and that there is a text field named `EmployeeName`. This example uses the `xfa` object to access and change the value of this field.

```
var eN = this.xfa.form.form1.EmployeeName;
console.println("\nEmployeeName: " + eN.rawValue);
```

The output to the console is

```
EmployeeName: A. C. Robat
```

Now change the value of the EmployeeName.

```
eN.rawValue = "Robat, A. C."
console.println("\nEmployeeName: " + eN.rawValue);
```

The output to the console is

```
EmployeeName: Robat, A. C.
```

The value of the field is changed.

Example 2

Call a function, defined in a folder level script file, that uses the xfa property, by passing the Doc object.

```
function isXFA(doc) {
   var wasWasNot = (typeof doc.xfa == "undefined") ? "not" : "";
   console.println("This document was "+wasWasNot+"created by Designer.");
}
```

From within the document, or from the console, the function is called is by `isXFA(this)`.

XFAForeground

8.0			

Returns `true` if the document is an XFA Foreground type of form and `false` otherwise.

Beginning with version 8.0, a PDF file can be imported as artwork into LiveCycle Designer. The possibly rich graphical content of the PDF is used as a background on which form fields can be placed using LiveCycle Designer. The `XFAForeground` property reports back whether the PDF was created in this way, a value of `true` means the PDF was imported into LiveCycle Designer as artwork, then saved by LiveCycle Designer.

Type

Boolean

Access

R

Example

This script determines whether the current document is an XFA Foreground type of form, that is, whether it was created by importing a PDF into LiveCycle Designer and saved.

```
if ( this.XFAForeground )
   console.println("This is an XFA Foreground form.");
```

zoom

3.01			

The current page zoom level. Allowed values are between 8.33% and 6400%, specified as a percentage number. For example, a zoom value of 100 specifies 100%.

Type

Number

Access

R/W

Example

Zoom to twice the current zoom level.

```
this.zoom *= 2;
```

Set the zoom to 200%.

```
this.zoom = 200;
```

zoomType

3.01			

The current zoom type of the document. The table below lists the valid zoom types.

The convenience `zoomtype` object defines all the valid zoom types and is used to access all zoom types.

Zoom type	Keyword	Version
`NoVary`	`zoomtype.none`	
`FitPage`	`zoomtype.fitP`	
`FitWidth`	`zoomtype.fitW`	
`FitHeight`	`zoomtype.fitH`	
`FitVisibleWidth`	`zoomtype.fitV`	

Zoom type	Keyword	Version
`Preferred`	`zoomtype.pref`	
`ReflowWidth`	`zoomtype.refW`	6.0

Type

String

Access

R/W

Example

Set the zoom type of the document to fit the width.

```
this.zoomType = zoomtype.fitW;
```

Doc methods

addAnnot

5.0	D		C

Creates an `Annotation` object having the specified properties. Properties not specified are given their default values for the specified `type` of annotation.

Note: (Acrobat 8.0) The behavior of `addAnnot` is changed in the case the `author` property is unspecified. If `addAnnot` is executed in an unprivileged context, the default value of `author` is the string `undefined`; if `addAnnot` is executed in an privileged context, the default value of the `author` property is the login name of the current user.

Parameters

object literal	A generic object that specifies the properties of the `Annotation` object, such as `type`, `rect`, and `page`, to be created.

Returns

The new `Annotation` object.

Example 1

This minimal example creates a square annotation.

```
var sqannot = this.addAnnot({type: "Square", page: 0});
```

`sqannot` will be created as a square annotation on the first page (using 0-based page numbering).

Example 2

Add a Text annotation with various properties.

```
var annot = this.addAnnot
({
   page: 0,
   type: "Text",
   author: "A. C. Robat",
   point: [300,400],
   strokeColor: color.yellow,
   contents: "Need a little help with this paragraph.",
   noteIcon: "Help"
});
```

Example 3

Add a Square annotation with various properties.

```
var annot = this.addAnnot({
   page: 0,
   type: "Square",
   rect: [0, 0, 100, 100],
   name: "OnMarketShare",
   author: "A. C. Robat",
   contents: "This section needs revision."
});
```

Example 4

A fancy ink annotation in the shape of a three-leaf rose.

```
var inch = 72, x0 = 2*inch, y0 = 4*inch;
var scaledInch = .5*inch;
var nNodes = 60;
var theta = 2*Math.PI/nNodes;
var points = new Array();
for (var i = 0; i <= nNodes; i++) {
   Theta = i*theta;
   points[i] = [x0 + 2*Math.cos(3*Theta)*Math.cos(Theta)*scaledInch,
   y0 + 2*Math.cos(3*Theta)*Math.sin(Theta)*scaledInch];
}
var annot = this.addAnnot({
   type: "Ink",
   page: 0,
   name: "myRose",
   author: "A. C. Robat",
   contents: "Three leaf rose",
   gestures: [points],
   strokeColor: color.red,
   width: 1
});
```

addField

5.0	D		F

Creates a new form field and returns it as a Field object.

Note: (Acrobat 6.0): Beginning with Acrobat 6.0, this method can be used from within Adobe Reader for documents with forms usage rights enabled. Prior to 6.0, it was not available from Adobe Reader.

Parameters

`cName`	The name of the new field to create. This name can use the dot separator syntax to denote a hierarchy (for example, `name.last` creates a parent node, `name`, and a child node, `last`).

`cFieldType`	The type of form field to create. Valid types are:
	`text`
	`button`
	`combobox`
	`listbox`
	`checkbox`
	`radiobutton`
	`signature`

`nPageNum`	The 0-based index of the page to which to add the field.
`oCoords`	An array of four numbers in rotated user space that specifies the size and placement of the form field. These four numbers are the coordinates of the bounding rectangle, in the following order: upper-left *x*, upper-left *y*, lower-right *x* and lower-right *y*. See also the Field object `rect` property. **Note:** If you use the Info panel to obtain the coordinates of the bounding rectangle, you must transform them from info space to rotated user space. To do this, subtract the info space *y* coordinate from the on-screen page height.

Returns

The newly created Field object.

Example

The following code might be used in a batch sequence to create a navigational icon on every page of a document, for each document in a selected set of documents.

```
var inch = 72;
for (var p = 0; p < this.numPages; p++) {
   // Position a rectangle (.5 inch, .5 inch)
   var aRect = this.getPageBox( {nPage: p} );
   aRect[0] += .5*inch;            // from upper left hand corner of page.
   aRect[2] = aRect[0]+.5*inch;    // Make it .5 inch wide
   aRect[1] -= .5*inch;
   aRect[3] = aRect[1] - 24;       // and 24 points high

   // Now construct a button field with a right arrow from ZapfDingbats
```

```
    var f = this.addField("NextPage", "button", p, aRect )
    f.setAction("MouseUp", "this.pageNum++");
    f.delay = true;
    f.borderStyle = border.s;
    f.highlight = "push";
    f.textSize = 0;                 // Auto-sized
    f.textColor = color.blue;
    f.fillColor = color.ltGray;
    f.textFont = font.ZapfD
    f.buttonSetCaption("\341")      // A right arrow
    f.delay = false;
}
```

See the Field object `setAction` method for another example.

addIcon

5.0	D		

Adds a new named `Icon` object to the document-level icon tree, storing it under the specified name.

See also `icons`, `getIcon`, `importIcon`, `removeIcon`, and the Field object methods `buttonGetIcon`, `buttonImportIcon`, and `buttonSetIcon`.

Parameters

`cName`	The name of the new object
`icon`	The `Icon` object to add.

Example

This example takes an icon already attached to a form button field in the document and assigns a name to it. This name can be used to retrieve the icon object with `getIcon` for use in another button, for example.

```
var f = this.getField("myButton");
this.addIcon("myButtonIcon", f.buttonGetIcon());
```

addLink

6.0	D		X

Adds a new link to the specified page with the specified coordinates, if the user has permission to add links to the document. See also `getLinks`, `removeLinks` and the `Link` object.

Parameters

`nPage`	The page on which to add the new link.
`oCoords`	An array of four numbers in rotated user space specifying the size and placement of the link. The numbers are the coordinates of the bounding rectangle in the following order: upper-left *x*, upper-left *y*, lower-right *x* and lower-right *y*.

Returns

The newly created `Link` object.

Example 1

Create simple navigational links in the lower left and right corners of each page of the current document. The link in lower left corner goes to the previous page; the one in the lower right corner goes to the next page.

```
var linkWidth = 36, linkHeight = 18;
for ( var i=0; i < this.numPages; i++)
{
   var cropBox = this.getPageBox("Crop", i);
   var linkRect1 = [0,linkHeight,linkWidth,0];
   var offsetLink = cropBox[2] - cropBox[0] - linkWidth;
   var linkRect2 = [offsetLink,linkHeight,linkWidth + offsetLink,0]
   var lhLink = this.addLink(i, linkRect1);
   var rhLink = this.addLink(i, linkRect2);
   var nextPage = (i + 1) % this.numPages;
   var prevPage = (i - 1) % this.numPages;
   var prevPage = (prevPage>=0) ? prevPage : -prevPage;
   lhLink.setAction( "this.pageNum = " + prevPage);
   lhLink.borderColor = color.red;
   lhLink.borderWidth = 1;
   rhLink.setAction( "this.pageNum = " + nextPage);
   rhLink.borderColor = color.red;
   rhLink.borderWidth = 1;
}
```

See the `Link` object for information on setting the properties and the action of a link.

Example 2

Search through the document for the word “Acrobat” and create a link around that word.

```
for (var p = 0; p < this.numPages; p++)
{
   var numWords = this.getPageNumWords(p);
   for (var i=0; i<numWords; i++)
   {
      var ckWord = this.getPageNthWord(p, i, true);
      if ( ckWord == "Acrobat")
      {
         var q = this.getPageNthWordQuads(p, i);
         // Convert quads in default user space to rotated
         // User space used by Links.
         m = (new Matrix2D).fromRotated(this,p);
         mInv = m.invert()
         r = mInv.transform(q)
         r=r.toString()
         r = r.split(",");
         l = addLink(p, [r[4], r[5], r[2], r[3]]);
         l.borderColor = color.red
```

```
            l.borderWidth = 1
            l.setAction("this.getURL('http://www.adobe.com/');");
        }
    }
}
```

addRecipientListCryptFilter

6.0	D	S	X

Adds a crypt filter to the document. The crypt filter is used for encrypting Data objects.

See also the `cCryptFilter` parameter of the `importDataObject`, `createDataObject`, and `setDataObjectContents` methods.

Note: Can only be executed during a batch, application initialization or console event. See also "Privileged versus non-privileged context" on page 32.

Parameters

`cCryptFilter`	The language-independent name of the crypt filter. This same name should be used as the value of the `cCryptFilter` parameter of the Doc methods `importDataObject`, `createDataObject`, and `setDataObjectContents`. **Note:** For Acrobat 7.0, the value of `cCryptFilter` must be `DefEmbeddedFile`; for other versions of Acrobat, the value of `cCryptFilter` can be any string.
`oGroup`	An array of `Group` objects that lists the recipients for whom the data is to be encrypted.

Example

This script encrypts the current document and embeds it into a PDF document.

```
var Note = "Select the list of people that you want to send this"
   + " document to. Each person must have both an email address"
   + " and a certificate that you can use when creating the"
   + "envelope.";
var oOptions = { bAllowPermGroups: false, cNote: Note,
   bRequireEmail: true };
var oGroups = security.chooseRecipientsDialog( oOptions );
var env = app.openDoc( "/c/temp/ePaperMailEnvelope.pdf" );
env.addRecipientListCryptFilter( "MyFilter", oGroups );
env.importDataObject( "secureMail0", this.path, "MyFilter" );
var envPath = "/c/temp/outMail.pdf";
env.saveAs( envPath );
```

Note: This script was executed in the console but is best executed as a folder JavaScript as part of a larger script for sending PDF documents securely.

addRequirement

7.0.5	D	S	X

Allows a PDF document to be authored so that a certain requirement is needed for the document to properly function in Acrobat.

When Acrobat opens a document containing a requirement, it will try to satisfy the requirement before allowing the user to freely interact with the document. If the requirement is not fulfilled, the application may limit the functionality of the document.

Note: This method can only be called from a console or batch event. See "Privileged versus non-privileged context" on page 32 for details.

Parameters

`cType`	The type of document requirement. The types are described by the `Requirements Enumerator` object.
`oReq`	(Optional) A `Requirement` object.

Requirements enumerator object

This object lists all the possible types of requirements that a document may contain to properly function in Acrobat.

Property	Description
`requirements.EnableJavaScripts`	Some documents may contain data validation scripts that may never run if the Enable JavaScript Execution user preference is disabled. This property allows a PDF document to enforce the execution of its scripts in Acrobat. The user will be prompted to either enable JavaScript execution for the particular document or to open the document in read-only mode.

Requirement object

This generic object contains properties that describe the nature of the requirement

Property	Description
`aRH`	(Optional) An array of `ReqHandler` objects.

ReqHandler object

This generic object contains information about a requirement handler that can be used when Acrobat finds an unrecognized requirement. The viewer should delegate requirement checking for the unrecognized requirement to the first handler in the array that supports the type. If no requirement

handler can be found to deal with the unrecognized requirement, a generic message should be provided by the viewer.

Property	Description
`cType`	A string specifying the type of the requirement handler (see the `ReqHandlers Enumerator object` for a lists of possible names).
`cScriptName`	(Optional) A string specifying the name of a document-level JavaScript present in the document. It may be present if the value of `cType` is `reqHandlers.JS`. The named script will not be executed in case the requirement is satisfied.

ReqHandlers Enumerator object

This object enumerates the types of requirement handlers a document may contain.

Property	Description
`reqHandlers.JS`	This handler manages document-level scripts that deal with unrecognized requirements in the PDF document.
`reqHandlers.NoOp`	This handler allows older viewers to ignore unrecognized requirements.

Example

Add a requirement to enable JavaScript in a document.

```
addRequirement(this.requirements.EnableJavaScripts,
   {[{cType: reqHandlers.JS, cScriptName: "requirement"}]});
```

addScript

6.0	D		X

Sets a document-level script for a document. See also `setAction`, `setPageAction`, the `Bookmark` object `setAction` method, and the Field object `setAction` method.

Note: This method overwrites any script already defined for `cName`.

Parameters

`cName`	The name of the script. If a script with this name already exists, the new script replaces the old one.
`cScript`	A JavaScript expression to be executed when the document is opened.

Example

Create a beeping sound every time the document is opened.

```
this.addScript("My Code", "app.beep(0);");
```

See Example 2 following the `disclosed` property for another example.

addThumbnails

5.0	D		X

Creates thumbnails for the specified pages in the document. See also the `removeThumbnails` method.

Parameters

`nStart`	(optional) A 0-based index that defines the start of an inclusive range of pages. If `nStart` and `nEnd` are not specified, the range of pages is for all pages in the document. If only `nStart` is specified, the range of pages is the single page specified by `nStart`. If only `nEnd` is specified, the range of a pages is 0 to `nEnd`.
`nEnd`	(optional) A 0-based index that defines the end of an inclusive range of pages. See `nStart` for details.

addWatermarkFromFile

7.0	D	S	X

Adds a page as a watermark to the specified pages in the document and places the watermark in an optional content group (OCG). See also the `OCG` object.

Note: Can only be executed during a batch or console event. See also "Privileged versus non-privileged context" on page 32.

Parameters

`cDIPath`	The device-independent path of the source file to use for the watermark. If the file at this location is not a PDF file, Acrobat attempts to convert the file to a PDF file.
`nSourcePage`	(optional) The 0-based index of the page in the source file to be used as the watermark. The default is 0.
`nStart`	(optional) The 0-based index of the first page in the range of pages to which the watermark should be added. If `nStart` and `nEnd` are not specified, the range of pages is for all pages in the document. If only `nStart` is specified, the range of pages is the single page specified by `nStart`. If only `nEnd` is specified, the range of pages is 0 to `nEnd`.
`nEnd`	(optional) The last page in the range of pages to which the watermark should be added. See `nStart` for details.
`bOnTop`	(optional) A Boolean value specifying the z-ordering of the watermark. If `true` (the default), the watermark is added above all other page content. If `false`, the watermark is added below all other page content. This parameter is ignored if `bFixedPrint` is `true`.
`bOnScreen`	(optional) A Boolean value to indicate whether the watermark should be displayed when viewing the document on screen. The default is `true`.

`bOnPrint`	(optional) A Boolean value to indicate whether the watermark should be displayed when printing the document. The default is `true`.
`nHorizAlign`	(optional) A number indicating how the watermark should be aligned horizontally. See `app.constants.align` for possible values. The default is `app.constants.align.center`.
`nVertAlign`	(optional) A number indicating how the watermark should be aligned vertically. See `app.constants.align` for possible values. The default is `app.constants.align.center`.
`nHorizValue`	(optional) A number used to shift the horizontal position of the watermark on the page. If `bPercentage` is `true`, this number represents a percentage of the horizontal page size. If `bPercentage` is `false`, this number represents the number of points to be offset. The default is 0.
`nVertValue`	(optional) A number used to shift the vertical position of the watermark on the page. If `bPercentage` is `true`, this number represents a percentage of the vertical page size. If `bPercentage` is `false`, this number represents the number of points to be offset. The default is 0.
`bPercentage`	(optional) A Boolean value that indicates whether `nHorizValue` and `nVertValue` represent a percentage of the page size or an explicit number of points. The default is `false`.
`nScale`	(optional) The scale to be used for the watermark, where 1.0 is 100%. A value of -1 specifies that the watermark should fit to the page while maintaining its proportions. The default is 1.0.
`bFixedPrint`	(optional) A Boolean value that indicates that this watermark should be added as a FixedPrint Watermark annotation. This allows watermarks to be printed at a fixed size/position regardless of the size of the page being printed to. If `true`, `bOnTop` is ignored. The default is `false`.
`nRotation`	(optional) The number of degrees to rotate the watermark counterclockwise. The default is `0`.
`nOpacity`	(optional) The opacity to be used for the watermark, where `0` is transparent and `1.0` is opaque. The default is `1.0`.

Example 1

Adds the first page of `watermark.pdf` as a watermark to the center of all pages of the current document.

```
this.addWatermarkFromFile("/C/temp/watermark.pdf");
```

Example 2

Adds the second page of `watermark.pdf` as a watermark to the first 10 pages of the current document. The watermark is rotated counterclockwise 45 degrees and positioned 1 inch down and 2 inches over from the upper-left corner of the page.

```
this.addWatermarkFromFile({
   cDIPath: "/C/temp/watermark.pdf",
   nSourcePage: 4, nEnd: 9,
   nHorizAlign: app.constants.align.left,
```

```
    nVertAlign: app.constants.align.top,
    nHorizValue: 144, nVertValue: -72,
    nRotation: 45
});
```

addWatermarkFromText

7.0	D		X

Adds the given text as a watermark to the specified pages in the document and places the watermark in an optional content group (OCG).

See the OCG object.

Parameters

cText	The text to use as the watermark. Multiline text is allowed. A newline can be specified with the characters "\r".
nTextAlign	(optional) The text alignment to use for cText within the watermark. See app.constants.align for possible values. This parameter has no effect if cText is only one line.
cFont	(optional) The font to be used for this watermark. Valid fonts are defined as properties of the font object, as listed in the textFont property of the Field object. An arbitrary font can be used by passing a string that represents the PostScript name of the font. The default is font.Helv.
nFontSize	(optional) The point size of the font to use for the watermark. The default is 24.
aColor	(optional) The color to use for the watermark. See "Color arrays" on page 193. The default is color.black.
nStart	(optional) The 0-based index of the first page in the range of pages to which the watermark should be added. If nStart and nEnd are not specified, the range of pages is for all pages in the document. If only nStart is specified, the range of pages is the single page specified by nStart.
nEnd	(optional) The last page in the range of pages to which the watermark should be added. If nStart and nEnd are not specified, the range of pages is for all pages in the document. If only nEnd is specified, the range of pages is 0 to nEnd.
bOnTop	(optional) A Boolean value specifying the z-ordering of the watermark. A value of true will result in the watermark being added above all other page content. A value of false will result in the watermark being added below all other page content. This parameter is ignored if bFixedPrint is true. The default is true.
bOnScreen	(optional) A Boolean value to indicate whether the watermark should be displayed when viewing the document on screen.
bOnPrint	(optional) A Boolean value to indicate whether the watermark should be displayed when printing the document.

`nHorizAlign`	(optional) A number indicating how the watermark should be aligned horizontally. See `app.constants.align` for possible values. The default is `app.constants.align.center`.
`nVertAlign`	(optional) A number indicating how the watermark should be aligned vertically. See `app.constants.align` for possible values. The default is `app.constants.align.center`.
`nHorizValue`	(optional) A number used to shift the horizontal position of the watermark on the page. If `bPercentage` is `true`, this number represents a percentage of the horizontal page size. If `bPercentage` is `false`, this number represents the number of points to be offset. The default is 0.
`nVertValue`	(optional) A number used to shift the vertical position of the watermark on the page. If `bPercentage` is `true`, this number represents a percentage of the vertical page size. If `bPercentage` is `false`, this number represents the number of points to be offset. The default is 0.
`bPercentage`	(optional) A Boolean value used to indicate whether `nHorizValue` and `nVertValue` represent a percentage of the page size or an explicit number of points. The default is `false`.
`nScale`	(optional) The scale to be used for the watermark, where `1.0` is 100%. A value of `-1` specifies that the watermark should fit to the page while maintaining its proportions. The default is `1.0`.
`bFixedPrint`	(optional) A Boolean value that indicates that the watermark should be added as a FixedPrint Watermark annotation. This prints the watermark at a fixed size and position regardless of the size of the page being printed to. If `true`, `bOnTop` is ignored. The default is `false`.
`nRotation`	(optional) The number of degrees to rotate the watermark counterclockwise. The default is `0`.
`nOpacity`	(optional) The opacity to be used for the watermark, where `0` is transparent and `1.0` is opaque. The default is `1.0`.

Example 1

Adds "Confidential" as a watermark to the center of all pages of the current document.

```
this.addWatermarkFromText("Confidential", 0, font.Helv, 24, color.red);
```

Example 2

Adds a multiline watermark to each page of the current document 1 inch down and 1 inch over from the upper-right corner.

```
this.addWatermarkFromText({
   cText: "Confidential Document\rA. C. Robat",
   nTextAlign: app.constants.align.right,
   nHorizAlign: app.constants.align.right,
   nVertAlign: app.constants.align.top,
   nHorizValue: -72, nVertValue: -72
});
```

addWeblinks

5.0	D		X

Scans the specified pages looking for instances of text with an `http:` scheme and converts them into links with URL actions.

See also the `removeWeblinks` method

Parameters

`nStart`	(optional) A 0-based index that defines the start of an inclusive range of pages. If `nStart` and `nEnd` are not specified, the range of pages is for all pages in the document. If only `nStart` is specified, the range of pages is the single page specified by `nStart`.
`nEnd`	(optional) A 0-based index that defines the end of an inclusive range of pages. If `nStart` and `nEnd` are not specified, the range of pages is for all pages in the document. If only `nEnd` is specified, the range of a pages is 0 to `nEnd`.

Returns

The number of web links added to the document.

Example

Search the entire document and convert all content that appears to be a web address into a web link. Report back the number of links created.

```
var numWeblinks = this.addWeblinks();
console.println("There were " + numWeblinks +
   " instances of text that looked like a web address,"
   +" and converted as such.");
```

bringToFront

5.0			

Brings an open document to the front.

Example

This example searches among the open documents for one with a title of “Annual Report” and brings it to the front.

```
var d = app.activeDocs;
for (var i = 0; i < d.length; i++)
   if (d[i].info.Title == "Annual Report") d[i].bringToFront();
```

calculateNow

3.01			

Forces computation of all calculation fields in the current document.

When a form contains many calculations, there can be a significant delay after the user inputs data into a field, even if it is not a calculation field. One strategy is to turn off calculations at some point and turn them back on later (see example).

Example

Turn off calculations

```
this.calculate = false;
.....
```

Turn on calculations

```
this.calculate = true;
```

Unless the user committed data after this.calculate is set to true, automatic calculation does not occur. Calculation can be forced to occur by using the following code.

```
this.calculateNow();
```

closeDoc

5.0			S

Closes the document.

For Adobe Reader 5.1 or later, the method is always allowed:

- If the document was changed and no Document Save Rights are available, the document is closed without any warnings and changes are lost.
- If Document Save Rights are available, the user has the option of saving the changed file.

It is important to use this method carefully, because it is an abrupt change in the document state that can affect any JavaScript executing after the close. Triggering this method from a Page event or Document event could cause the application to behave strangely.

In versions of Acrobat earlier than 7.0, a document that closes itself by executing `this.closeDoc` terminates any script that follows it. In Acrobat 7.0, the script is allowed to continue and to terminate naturally. However, if the Doc of the closed document is referenced, an exception will be thrown.

Parameters

`bNoSave`	(optional) A Boolean value indicating whether to close the document without saving: • If `false` (the default), the user is prompted to save the document if it has been modified. • If `true`, the document is closed without prompting the user and without saving, even if the document has been modified. Be careful in using this feature because it can cause data loss without user approval.

Example 1

From the console, close all open documents.

```
var d = app.activeDocs;
for( var i in d ) d[i].closeDoc();
```

The following code can be executed as a mouse-up action from an open document. It closes all *disclosed* open documents. The code is designed to close the active document last so that the execution of the code will not be abruptly terminated.

```
var d = app.activeDocs;
for( var i in d )
   if( d[i] != this ) d[i].closeDoc();
if ( this.disclosed ) this.closeDoc();
```

Example 2

Create a series of three test files and save them to a directory. This code must be executed in the console, because `saveAs` has a security restriction.

```
var myDoc = app.newDoc();
for (var i=0; i < 3; i++) {
   myDoc.info.Title = "Test File " + i;
   myDoc.saveAs("/c/temp/test"+i+".pdf);
}
myDoc.closeDoc(true);
```

See `saveAs` for an another example of `closeDoc`.

colorConvertPage

8.0	D		P

Performs color conversion on a page of the document.

Parameters

`pageNum`	A 0-based index that defines the page number of the document that should be converted.
`actions`	An array of colorConvertAction objects for this color conversion. The properties of the colorConvertAction object are listed beginning on page 196. For each object on the page, the actions are matched against the object's attributes and color spaces in the order in which they occur in the actions array, until a match is found and that action is executed. The list of actions is analogous to the list of filters in most email clients: each object is compared against the selection criteria for each of the actions, in order, until a matching action is found. The action is then executed on the object. Note that actions do not chain, except in the case of aliased ink definitions.
`inkActions`	An array of colorConvertAction objects which describes the ink actions for this color conversion. The list of inks defines the actions for individual separations, whether they occur in Separation or DeviceN. This allows one to define, among other things, ink aliases. If a DeviceN contains some inks to be aliased and some to be converted, the color is converted using OPP technology, so that the converted part ends up as process and the aliased part stays as spot. For ink actions, the match fields are ignored. There should be an underlying Separation or DeviceN defined in the action list describing what to do, and the aliases in the ink action list apply if the action in the action list for the underlying space is Preserve or Decalibrate.

Returns

A Boolean value, returns `true` if the page was changed, otherwise, returns `false`.

Example

See `getColorConvertAction` on page 299 for an example.

createDataObject

5.0	D		D

Creates a `Data` object.

Data objects can be constructed *ad hoc*. This is useful if the data is being created in JavaScript from sources other than an external file (for example, ADBC database calls).

Related objects, properties, and methods are `dataObjects`, `getDataObject`, `openDataObject`, `importDataObject`, `removeDataObject`, `getDataObjectContents`, and `setDataObjectContents`, and the `Data` object.

Parameters

`cName`	The name to associate with the data object.
`cValue`	A string containing the data to be embedded.
`cMIMEType`	(optional) The MIME type of the data. The default is "text/plain".
`cCryptFilter`	(optional, Acrobat 6.0) The language-independent name of a crypt filter to use when encrypting this data object. This crypt filter must have previously been added to the document's list of crypt filters, using the Doc `addRecipientListCryptFilter` method, otherwise an exception will be thrown. The predefined Identity crypt filter can be used so that this data object is not encrypted in a file that is otherwise encrypted by the Doc `encryptForRecipients` method.

Example

```
this.createDataObject("MyData.txt", "This is some data.");
```

See also the example that follows `addRecipientListCryptFilter`.

createTemplate

5.0	D	S	X

Note: In Adobe Reader 5.1 and later, this method was allowed with Advanced Form Features rights. Beginning with version 7.0 of Adobe Reader, this method is not allowed and will throw a `NotAllowedError` exception.

Creates a visible template from the specified page. See also the `templates` property, the `getTemplate` and `removeTemplate` methods, and the `Template` object.

Note: This method can only be executed during a batch or console event. (See "Privileged versus non-privileged context" on page 32.) The `event` object contains a discussion of JavaScript events.

Parameters

`cName`	The name to be associated with this page.
`nPage`	(optional) The 0-based index of the page to operate on. The default is `0`, the first page in the document.

Returns

The newly created `Template` object.

Example

Convert all pages beginning with page 2 to hidden templates. As the templates are hidden, `this.numPages` is updated to reflect that change in the number of (visible) pages. Notice that in the loop below, only page 2 is made a template and then hidden. The next page will become the new page 2.

```
numNewTemplates = this.numPages - 2;
for ( var i = 0; i < numNewTemplates; i++)
{
   var t = this.createTemplate({cName:"myTemplate"+i, nPage:2 });
   t.hidden = true;
}
```

deletePages

5.0	D		F

Deletes pages from the document. If neither page of the range is specified, the first page (page 0) is deleted. See also `insertPages`, `extractPages`, and `replacePages`.

Note: You cannot delete all pages in a document; there must be at least one page remaining.

(Acrobat 6.0): Beginning with version 6.0, this method deletes *spawned* pages from within Adobe Reader for documents with forms usage rights enabled.

Parameters

`nStart`	(optional) The 0-based index of the first page in the range of pages to be deleted. The default is `0`, the first page in the document.
`nEnd`	(optional) The last page in the range of pages to be deleted. If `nEnd` is not specified, only the page specified by `nStart` is deleted.

Example

Delete pages 1 through 3 (base 0), inclusive.

```
this.deletePages({nStart: 1, nEnd: 3});
```

deleteSound

5.0	D		X

Deletes the `Sound` object with the specified name from the document.

See also `sounds`, `getSound`, `importSound`, and the `Sound` object.

Parameters

`cName`	The name of the sound object to delete.

Example

```
this.deleteSound("Moo");
```

embedDocAsDataObject

7.0			D

Embeds the specified document as a Data Object in the document.

Note: For Adobe Reader 7.0 and later, this method is allowed if the document has file attachment rights, but the document to be embedded must have document Save rights in case it has changed.

Parameters

`cName`	The name to associate with the data object.
`oDoc`	The document to embed as a data object.
`cCryptFilter`	(optional) The language-independent name of a crypt filter to use when encrypting this data object. This crypt filter must have previously been added to the document's list of crypt filters, using the `addRecipientListCryptFilter` method, otherwise an exception will be thrown. The predefined Identity crypt filter can be used so that this data object is not encrypted in a file that is otherwise encrypted by the `encryptForRecipients` method.
`bUI`	(optional) If `true`, an alert may be shown if `oDoc` requires saving and the permissions do not allow it to be saved. Default value is `false`.

Example

An envelope file that includes a "myFilter" crypt filter has been previously authored and has been included in the current document.

```
var authorEmail = "johndoe@example.com";
var envelopeDoc = this.openDataObject( "envelope" );
envelopeDoc.embedDocAsDataObject( "attachment", this, "myFilter" );
envelopeDoc.title.Author = authorEmail;
envelopeDoc.mailDoc({
   cTo: "support@example.com",
   cSubject: "Application from " + authorEmail
});
```

embedOutputIntent

8.0	D		P

Embeds a color profile as a PDF/X Output Intent (see the *PDF Reference*, version 1.7).

Parameters

`outputIntentColorSpace`	A string containing the description of the profile to use for the output intent. A list of available color profiles can be obtained from the `printColorProfiles` property of the `app` object, page 93.

Example

Embed a color profile.

```
this.embedOutputIntent("U.S. Sheetfed Coated v2")
```

encryptForRecipients

6.0	D	S	X

Encrypts the document for the specified lists of recipients, using the public-key certificates of each recipient. Encryption does not take place until the document is saved. Recipients can be placed into groups and each group can have its own unique permission settings. This method throws an exception if it is unsuccessful.

Note: This method is available from batch, console and app initialization events. See also "Privileged versus non-privileged context" on page 32.

See also the `createDataObject` method, the `security.chooseRecipientsDialog` method, and the `Data` object.

Parameters

`oGroups`	An array of generic `Group` objects that list the recipients for which the document is to be encrypted.
`bMetaData`	(optional) If `true` (the default), document metadata should be encrypted. Setting this value to `false` will produce a document that can only be viewed in Acrobat 6.0 or later.
`bUI`	(optional) If `true`, the handler displays the user interface, in which the user can select the recipients for whom to encrypt the document. The default value is `false`.

Returns

`true`, if successful, otherwise an exception is thrown.

Group object

A generic JavaScript object that allows a set of permissions to be attached to a list of recipients for which a document or data is to be encrypted. This object is passed to `encryptForRecipients` and returned by `security.chooseRecipientsDialog`. It contains the following properties.

Property	Description
`permissions`	A `Permissions` object with the permissions for the group.
`userEntities`	An array of `UserEntity` objects, the users to whom the permissions apply.

Permissions object

A generic JavaScript object that contains a set of permissions, used in a `Group` object. It contains the following properties. The default value for all Boolean properties is `false`.

Property	Type	Access	Description
`allowAll`	Boolean	R/W	Specifies whether full, unrestricted access is permitted. If `true`, overrides all other properties.
`allowAccessibility`	Boolean	R/W	Specifies whether content access for the visually impaired is permitted. If `true`, allows content to be extracted for use by applications that, for example, read text aloud.
`allowContentExtraction`	Boolean	R/W	Specifies whether content copying and extraction is permitted.

`allowChanges`	String	R/W	What changes are allowed to be made to the document. Values are:
			`none`
			`documentAssembly`
			`fillAndSign`
			`editNotesFillAndSign`
			`all`

`allowPrinting`	String	R/W	What the allowed printing security level is for the document. Values are:
			`none`
			`lowQuality`
			`highQuality`

Example

Encrypt all strings and streams in the document. This will produce a file that can be opened with Acrobat 5.0 and later:

```
var sh = security.getHandler( "Adobe.PPKMS" );
var dir = sh.directories[0];
var dc = dir.connect();

dc.setOutputFields({oFields:["certificates"]});
var importantUsers = dc.search({oParams:{lastName:"Smith"}});
var otherUsers = dc.search({oParams: {lastName:"Jones" }});

this.encryptForRecipients({
   oGroups :
   [
      {userEntities:importantUsers,permissions:{allowAll:true }},
      {userEntities: otherUsers, permissions:{allowPrinting:"highQuality"}}
   ],
   bMetaData : true
});
```

encryptUsingPolicy

7.0		S	X

Encrypts the document using a specified policy object and handler. This method may require user interaction and may result in a new security policy being created.

Note: This method can be executed only during a batch, console or application initialization event. See also "Privileged versus non-privileged context" on page 32.

Parameters

`oPolicy`	The policy object to use when encrypting the document. It may be a `SecurityPolicy` object returned from `chooseSecurityPolicy` or `getSecurityPolicies`. This parameter may also be a generic object with the `policyId` property defined. If a predefined policy ID is passed, the associated policy is retrieved and used. If the policy ID passed is unknown, an error is returned. There is a predefined policy ID that has a special behavior. If `policyId` is set to "adobe_secure_for_recipients", a new policy will be created by the Adobe® LiveCycle® Policy Server. (A Policy Server must be configured for publishing.) **Note:** If this special policy ID is used and `oGroups` is `null`, an error will be returned.
`oGroups`	(optional) An array of `Group` objects that the handler should use when applying the policy. The exact behavior depends on the policy used and the handler involved. The Group object may have embedded permission information. Whether that information is used depends on the policy and associated security handler. The default value is `null`.
`oHandler`	(optional) The `SecurityHandler` object to be used for encryption. This will result in failure if this handler does not match the handler name specified in the `oPolicy` object. If not specified, the default object associated with this handler will be used. If you are using the APS security handler, you can create a new SecurityHandler ahead of time, authenticate to a server not configured in Acrobat through the `login` call, and then pass that SecurityHandler in `oHandler`. This would allow you to use policies that are not defined on the server Acrobat is configured to use. If you are using the PPKLite security handler, you could create a new SecurityHandler ahead of time, open a digital ID file not configured in Acrobat through the `login` call, and then pass that SecurityHandler in `oHandler`. This would allow you to use certificates contained in the digital ID file but not in Acrobat.
`bUI`	(optional) If `true`, the user interface may be displayed (for example, for authentication). If `false`, the user interface will not be displayed. If user interaction is required but not allowed, an error is returned. The default value is `false`.

Returns

The value returned is a SecurityPolicyResults object, which has the following properties.

Property	Type	Description
`errorCode`	Integer	The error code returned from the handler implementing the policy. There are three possible errors: 0 = Success. `errorText` is not defined. `unknownRecipients` may be defined. `policyApplied` is defined. 1 = Failure. `errorText` is defined. `unknownRecipients` may be defined. `policyApplied` is not defined. 2 = Abort, the user aborted the process. `errorText` is not defined. `unknownRecipients` is not defined. `policyApplied` is not defined.
`errorText`	String	The localized error description, if defined. See `errorCode` for when this is defined.
`policyApplied`	Object	The SecurityPolicy object applied, if defined. If the policy passed in was "adobe_secure_for_recipients", a new policy was created by the call and the corresponding policy object will be returned here. See `errorCode` for when this is defined.
`unknownRecipients`	Recipients object	Recipients passed in that could not be used when applying the policy, if defined. See `errorCode` for when this is defined.

Example 1

Encrypt a newly created document using a chosen policy.

```
var doc = app.newDoc();
var policy = security.chooseSecurityPolicy();
var results = doc.encryptUsingPolicy( { oPolicy: policy } );
if ( results.errorCode == 0)
   console.println("The policy applied was: " + results.policyApplied.name);
```

Example 2

Encrypt a newly created document using a template policy. (A LiveCycle Policy Server must be configured for publishing before running this example.)

```
var doc = app.newDoc();
var groups = [ { userEntities: [{email:"jdoe@example.com"},
   {email:"bsmith@example.com"} ]}
];
```

```
var policy = { policyId: "adobe_secure_for_recipients" };
var results = doc.encryptUsingPolicy({
   oPolicy: policy,
   oGroups: groups,
   bUI: true
});
if ( results.errorCode == 0)
   console.println("The policy applied was: "
      + results.policyApplied.name);
```

exportAsFDF

4.0		S	F

Exports form fields as an FDF file to the local hard drive.

Note: If the `cPath` parameter is specified, this method can only be executed during batch and console events. See also "Privileged versus non-privileged context" on page 32. The `event` object contains a discussion of JavaScript events.

Parameters

`bAllFields`	(optional) If `true`, all fields are exported, including those that have no value. If `false` (the default), excludes those fields that currently have no value.
`bNoPassword`	(optional) If `true` (the default), do not include text fields that have the password flag set in the exported FDF file.
`aFields`	(optional) The array of field names to submit or a string containing a single field name: • If specified, only these fields are exported, except those excluded by `bNoPassword`. • If `aFields` is an empty array, no fields are exported. The FDF file might still contain data, depending on the `bAnnotations` parameter. • If this parameter is omitted or is `null`, all fields in the form are exported, except those excluded by `bNoPassword`. Specify non-terminal field names to export an entire subtree of fields (see the example below).
`bFlags`	(optional) If `true`, field flags are included in the exported FDF file. The default is `false`.
`cPath`	(optional) A string specifying the device-independent path for the file. The path may be relative to the location of the current document. If the parameter is omitted, a dialog box is shown to let the user select the file. **Note:** The parameter `cPath` must have a safe path (see "Safe path" on page 31) and have a `.fdf` extension. This method will throw a `NotAllowedError` (see `Error` object) exception if these security conditions are not met, and the method will fail.
`bAnnotations`	(optional, Acrobat 6.0) If `true`, annotations are included in the exported FDF file. The default is `false`.

Example 1

Export the entire form (including empty fields) with flags.

```
this.exportAsFDF(true, true, null, true);
```

Example 2

Export the *name* subtree with no flags.

```
this.exportAsFDF(false, true, "name");
```

This example shows a shortcut to exporting a whole subtree. By passing "name" as part of the `aFields` parameter, fields such as "name.title", "name.first", "name.middle", and "name.last" are exported.

exportAsFDFStr

8.0			

Computes the same results as calling the `doc.exportAsFDF` method, but returns the results as a string instead of saving to a file.

Parameters

`bAllFields`	(optional) If `true`, all fields are exported, including those that have no value. If `false` (the default), excludes those fields that currently have no value.
`bNoPassword`	(optional) If `true` (the default), do not include text fields that have the password flag set in the exported FDF file.
`aFields`	(optional) The array of field names to submit or a string containing a single field name: • If specified, only these fields are exported, except those excluded by `bNoPassword`. • If `aFields` is an empty array, no fields are exported. The FDF file might still contain data, depending on the `bAnnotations` parameter. • If this parameter is omitted or is `null`, all fields in the form are exported, except those excluded by `bNoPassword`. Specify non-terminal field names to export an entire subtree of fields (see the example below).
`bFlags`	(optional) If `true`, field flags are included in the exported FDF file. The default is `false`.
`bAnnotations`	Must be `false`, which is the default. Annotations are not supported.
`cHRef`	When supplied, its value is inserted as the source or target file of the returned FDF expression (i.e., the value of the F key in the FDF dictionary).

Returns

The contents of the file as would be produced by the `doc.exportAsFDF` method, returned as a string. If supplied, the `cHRef` parameter is inserted as the value of the **F** key in the **FDF** dictionary. If not supplied, the **F** key contains the value as `doc.exportAsFDF` would produce.

Example

Get form data for the fields `FirstName`, `LastName` and `Address` in FDF format as a string.

```
var cFDF = this.exportAsFDFStr({
   aFields: ["FirstName", "LastName", "Address"],
   cHRef: "http://www.example.com/formcatalog/ThisFormName.pdf"
});
```

exportAsText

6.0		S	F

Exports form fields as a tab-delimited text file to a local hard disk. The text file that is created follows the conventions specified by Microsoft Excel. In particular, `exportAsText` correctly handles quotes and multiline text fields.

This method writes two lines to the text file, the first line is a tab-delimited list of the names of the fields specified by `aFields`, the second line is a tab-delimited list of the values of the fields.

Note: If the `cPath` parameter is specified, this method can only be executed during a batch or console event. See also "Privileged versus non-privileged context" on page 32. The `event` object includes a discussion of JavaScript events.

Parameters

`bNoPassword`	(optional) If `true` (the default), do not include text fields that have the password flag set in the exported text file.
`aFields`	(optional) The array of field names to submit or a string containing a single field name: • If specified, only these fields are exported, except those excluded by `bNoPassword`. • If `aFields` is an empty array, no fields are exported. • If this parameter is omitted or is `null`, all fields in the form are exported, except those excluded by `bNoPassword`.
`cPath`	(optional) A string specifying the device-independent path for the file. The path may be relative to the location of the current document. If the parameter is omitted, a dialog box is shown to let the user select the file. **Note:** The parameter `cPath` is must have a safe path (see "Safe path" on page 31) and have a `.txt` extension. This method will throw a `NotAllowedError` (see `Error` object) exception if these security conditions are not met, and the method will fail.

Example

To export all fields to a tab-delimited file, execute the following script in the console:

```
this.exportAsText();
```

To create a tab-delimited file with more than just one data line, see the "Example" on page 300.

exportAsXFDF

5.0		S	F

Exports form fields as an XFDF file to the local hard drive.

XFDF is an XML representation of Acrobat form data. See the document *XML Form Data Format Specification* (see "Related documentation" on page 28).

There is an import version of this same method, `importAnXFDF`.

Note: If the `cPath` parameter is specified, this method can only be executed during batch and console events. See "Privileged versus non-privileged context" on page 32 for details. The `event` object contains a discussion of JavaScript events.

Parameters

`bAllFields`	(optional) If `true`, all fields are exported, including those that have no value. If `false` (the default), excludes those fields that currently have no value.
`bNoPassword`	(optional) If `true` (the default), do not include text fields that have the password flag set in the exported XFDF.
`aFields`	(optional) The array of field names to submit or a string containing a single field name: • If specified, only these fields are exported, except those excluded by `bNoPassword`. • If `aFields` is an empty array, no fields are exported. The XFDF file might still contain data, depending on the `bAnnotations` parameter. • If this parameter is omitted or is `null`, all fields in the form are exported, except those excluded by `bNoPassword`. Specify non-terminal field names to export an entire subtree of fields.
`cPath`	(optional) A string specifying the device-independent path for the file. The path may be relative to the location of the current document. If the parameter is omitted, a dialog box is shown to let the user select the file. **Note:** The parameter `cPath` must have a safe path (see "Safe path" on page 31) and have a `.xfdf` extension. This method will throw a `NotAllowedError` (see `Error` object) exception if these security conditions are not met, and the method will fail.
`bAnnotations`	(optional, Acrobat 6.0) If `true`, annotations are included in the exported XFDF file. The default is `false`.

exportAsXFDFStr

8.0			

Computes the same results as calling the `doc.exportAsXFDF` method, but returns the results as a string instead of saving to a file.

Parameters

`bAllFields`	(optional) If `true`, all fields are exported, including those that have no value. If `false` (the default), excludes those fields that currently have no value.
`bNoPassword`	(optional) If `true` (the default), do not include text fields that have the password flag set in the exported XFDF file.
`aFields`	(optional) The array of field names to submit or a string containing a single field name: • If specified, only these fields are exported, except those excluded by `bNoPassword`. • If `aFields` is an empty array, no fields are exported. The XFDF file might still contain data, depending on the `bAnnotations` parameter. • If this parameter is omitted or is `null`, all fields in the form are exported, except those excluded by `bNoPassword`. Specify non-terminal field names to export an entire subtree of fields.
`bAnnotations`	Must be `false`, which is the default. Annotations are not supported.
`cHRef`	When supplied, its value is inserted as the source or target file of the returned XFDF expression (i.e., the value of the `href` attribute of the `f` element child of the `xfdf` element).

Returns

The contents of the file as would be produced by the `doc.exportAsXFDF` method, returned as a string. If supplied, the `cHRef` parameter is inserted as the value of the `href` attribute of the `f` element child of the `xfdf` element. If not supplied, the `href` attribute of the `f` element key contains the value as `doc.exportAsXFDF` would produce.

Example

Get the values of the form fields `FirstName`, `LastName` and `Address` in XFDF format as a string.

```
var cXFDF = this.exportAsXFDFStr({
   aFields: ["FirstName", "LastName", "Address"],
   cHRef: "http://www.example.com/formcatalog/ThisFormName.pdf"
});
```

exportDataObject

5.0		S	

Extracts the specified data object to an external file.

Related objects, properties, and methods are `dataObjects`, `openDataObject`, `createDataObject`, `removeDataObject`, `importDataObject`, `getDataObjectContents`, and `setDataObjectContents`, and the `Data` object.

Note: Beginning with Acrobat 6.0, if the parameter `cDIPath` is non-`null`, a `NotAllowedError` (see `Error` object) exception is thrown and the method fails.

If `cDIPath` is not passed to this method, a file selection dialog box opens to allow the user to select a save path for the embedded data object.

Parameters

`cName`	The name of the data object to extract.
`cDIPath`	(optional) A device-independent path to which to extract the data object. This path may be absolute or relative to the current document. If not specified, the user is prompted to specify a save location. **Note:** (Acrobat 6.0) The use of this parameter is no longer supported and should not be used. See the security notes above.
`bAllowAuth`	(optional, Acrobat 6.0) If `true`, a dialog box is used to obtain user authorization. Authorization may be required if the data object was encrypted using the `encryptForRecipients` method. Authorization dialog boxes are allowed if `bAllowAuth` is `true`. The default value is `false`.
`nLaunch`	(optional, Acrobat 6.0) `nLaunch` controls whether the file is launched, or opened, after it is saved. Launching may involve opening an external application if the file is not a PDF file. The values of `nLaunch` are: • If the value is `0`, the file will not be launched after it is saved. • If the value is `1`, the file will be saved and then launched. Launching will prompt the user with a security alert warning if the file is not a PDF file. The user will be prompted for a save path. • If the value is `2`, the file will be saved and then launched. Launching will prompt the user with a security alert warning if the file is not a PDF file. A temporary path is used, and the user will not be prompted for a save path. The temporary file that is created will be deleted by Acrobat upon application shutdown. The default value is `0`.

Example 1

Prompt the user for a file and location to extract to.

```
this.exportDataObject("MyData");
```

Example 2 (Acrobat 6.0)

Extract a PDF document and launch it in the viewer.

```
this.exportDataObject({ cName: "MyPDF.pdf", nLaunch: 2 });
```

Example 3

When a file attachment is imported using the `importDataObject` method, the value of its `Data.name` property is assigned by that method's `cName` parameter. However, when a file is attached using the UI, its `name` is automatically assigned. The attachments are assigned the sequential names "Untitled Object", "Untitled Object 2", "Untitled Object 3", and so on.

To export a file attached through the UI, the `name` of the attachment must be found. For the code that follows, the last file attached by the UI, if any, is exported.

```
var d = this.dataObjects;
if ( d == null ) console.println("No file attachments");
else {
   for ( var i = d.length - 1; i>=0; i--)
      if ( d[i].name.indexOf("Untitled Object") != -1 ) break;
   if ( i != -1 ) this.exportDataObject(d[i].name);
   else console.println("No attachment was embedded by UI");
}
```

exportXFAData

6.0		S	F

Exports the XFA data (if any) from the document and saves it as an XDP file.

Note: When exporting XFA data from Adobe Reader, the document must have export form rights.

If the `cPath` parameter is specified, this method can only be executed during batch, console or menu events. See "Privileged versus non-privileged context" on page 32 for details. The `event` object contains a discussion of JavaScript events.

Parameters

`cPath`	(optional) A device-independent path for the file. The path may be relative to the document. If this parameter is omitted, a dialog box is shown to let the user select the file. The path must meet the following conditions: • It must be a safe path (see "Safe path" on page 31). • If `bXDP` is `true`, the file name must have an `.xdp` extension. • If `bXDP` is `false`, the file name must have an `.xml` extension. This method throws a `NotAllowedError` (see `Error` object) exception if these conditions are not met.

`bXDP`	(optional) If `true` (the default), the data is exported in XDP format. Otherwise, it is exported in plain XML data format.

`aPackets`	(optional) An array of strings specifying the packets to include in the XDP export. This parameter is applicable only if `bXDP` is `true`.
	
	Possible strings are:
	
	`template`
	`datasets`
	`stylesheet`
	`xfdf`
	`sourceSet`
	`pdf`
	`config`
	`*`
	
	If `pdf` is specified, the PDF file is embedded. Otherwise, only a link to the PDF file is included in the XDP file.
	
	If `xfdf` is specified, annotations are included in the XDP file (since that packet uses XFDF format).
	
	If `*` is specified, all packets are included in the XDP file. However, the default for the `pdf` packet is to include it as a *reference*. To embed the PDF file in the XDP file, explicitly specify `pdf` as one of the packets.
	
	Note: (Save rights required) When exporting in the XDP format from Adobe Reader, the document must have document save rights only in the case where `pdf` is listed explicitly.
	
	The default for this parameter is: `["datasets", "xfdf"]`.

Example

Export XFA data. In the following example, all packets are included. However, the PDF document is referenced, not embedded:

```
this.exportXFAData({
   cPath: "/c/temp/myData.xdp",
   bXDP: true,
   aPackets: ["*"]
})
```

In this example, all packets are included, with the PDF document embedded in the XDP file.

```
this.exportXFAData({
   cPath: "/c/temp/myData.xdp",
   bXDP: true,
   aPackets: ["*","pdf"]
})
```

extractPages

5.0	D	S	X

Creates a new document consisting of pages extracted from the current document. If a page range is not specified, the method extracts all pages in the document.

See also `deletePages`, `insertPages`, and `replacePages`.

Note: If the `cPath` parameter is specified, this method can only be executed during a batch and console event, or through an external call (for example, OLE). See "Privileged versus non-privileged context" on page 32 for details. The `event` object contains a discussion of JavaScript events.

Parameters

`nStart`	(optional) A 0-based index that defines the start of the range of pages to extract from the source document. If only `nStart` is specified, the range of pages is the single page specified by `nStart`.
`nEnd`	(optional) A 0-based index that defines the end of the range of pages to extract from the source document. If only `nEnd` is specified, the range of pages is 0 to `nEnd`.
`cPath`	(optional) The device-independent path to save the new document. The path name may be relative to the location of the current document. **Note:** The parameter `cPath` must have a safe path (see "Safe path" on page 31) and have a `.pdf` extension. This method will throw a `NotAllowedError` (see `Error` object) exception if these security conditions are not met, and the method will fail.

Returns

If `cPath` is not specified, returns the Doc for the new document; otherwise, returns the `null` object.

Example

The following batch sequence takes each of the selected files, extracts each page, and saves the page in a folder with a unique name. It could be used, for example, when the client's one-page bills are produced by an application and placed in a single PDF file. The client wants to separate the pages for distribution or for separate printing jobs.

```
/* Extract pages to folder */
// Regular expression used to acquire the base name of file
var re = /\.pdf$/i;
// filename is the base name of the file Acrobat is working on
var filename = this.documentFileName.replace(re,"");
try {for (var i = 0; i < this.numPages; i++)
     this.extractPages({
        nStart: i,
        cPath: "/F/temp/"+filename+"_" + i +".pdf"
     });
} catch (e) { console.println("Aborted: " + e) }
```

flattenPages

5.0	D		X

Converts all annotations in a page range to page contents. If a page range is not specified, all annotations in the document are converted.

Note: Great care must be used when using this method. All annotations—including form fields, comments, and links—on the specified range of pages are flattened. They may have appearances, but they will no longer be annotations.

Parameters

`nStart`	(optional) A 0-based index that defines the start of an inclusive range of pages in the current document. If only `nStart` is specified, the page range is the single page specified by `nStart`.
`nEnd`	(optional) A 0-based index that defines the end of an inclusive range of pages in the current document.
`nNonPrint`	(optional, Acrobat 6.0) This parameter determines how to handle non-printing annotations. Values are `0` — (default) Non-printing annotations are flattened. `1` — Non-printing annotations are left as is. `2` — Non-printing annotations are removed from the document.

Example

Flatten all pages in the document.

```
this.flattenPages();
```

getAnnot

5.0			

Returns an `Annotation` object contained on a specific document page.

Parameters

`nPage`	The page that contains the `Annotation` object.
`cName`	The name of the `Annotation` object.

Returns

The `Annotation` object, or `null` if there is no such annotation.

Example

Attempt to get a particular annotation.

```
var ann = this.getAnnot(0, "OnMarketShare");
if (ann == null)
   console.println("Not Found!")
else
   console.println("Found it! type: " + ann.type);
```

getAnnot3D

7.0			

Gets an `Annot3D` object with a given name from a given page.

Parameters

`nPage`	The 0-based page number that contains the `Annot3D` object.
`cName`	The name of the `Annot3D` object.

Returns

The `Annot3D` object, or `undefined` if there is no such annotation.

getAnnots

5.0			

Gets an array of `Annotation` objects satisfying specified criteria. See also `getAnnot` and `syncAnnotScan`.

Parameters

`nPage`	(optional) A 0-based page number. If specified, gets only annotations on the given page. If not specified, gets annotations that meet the search criteria from all pages.
`nSortBy`	(optional) A sort method applied to the array. Values are: **`ANSB_None`** — (default) Do not sort; equivalent to not specifiying this parameter. **`ANSB_Page`** — Use the page number as the primary sort criteria. **`ANSB_Author`** — Use the author as the primary sort criteria. **`ANSB_ModDate`** — Use the modification date as the primary sort criteria. **`ANSB_Type`** — Use the annotation type as the primary sort criteria.

`bReverse`	(optional) If `true`, causes the array to be reverse sorted with respect to `nSortBy`.
`nFilterBy`	(optional) Gets only annotations satisfying certain criteria. Values are: **`ANFB_ShouldNone`** — (default) Get all annotations. Equivalent of not specifying this parameter. **`ANFB_ShouldPrint`** — Only include annotations that can be printed. **`ANFB_ShouldView`** — Only include annotations that can be viewed. **`ANFB_ShouldEdit`** — Only include annotations that can be edited. **`ANFB_ShouldAppearInPanel`** — Only annotations that appear in the annotations pane. **`ANFB_ShouldSummarize`** — Only include annotations that can be included in a summary. **`ANFB_ShouldExport`** — Only include annotations that can be included in an export.

Returns

An array of `Annotation` objects, or `null` if none are found.

Example

Acquire all annotations on the first page, and write information to the console.

```
this.syncAnnotScan();
var annots = this.getAnnots({
   nPage:0,
   nSortBy: ANSB_Author,
   bReverse: true
});
console.show();
console.println("Number of Annotations: " + annots.length);
var msg = "%s in a %s annot said: \"%s\"";
for (var i = 0; i < annots.length; i++)
   console.println(util.printf(msg, annots[i].author, annots[i].type,
      annots[i].contents));
```

getAnnots3D

7.0			

Returns an array of `Annot3D` objects for a page.

Parameters

`nPage`	The 0-based page number that contains the `Annot3D` objects.

Returns

An array of `Annot3D` objects, or `undefined` if none is found.

getColorConvertAction

8.0			P

Gets a `colorConvertAction` object that reflects default color conversion settings.

See `colorConvertPage`, which takes two arrays of colorConvertAction objects as parameters.

Returns

A colorConvertAction object

Example

Get a colorConvertAction object, set it up to convert everything to RGB. (Note that we do not convert any alternate spaces, hence the "space type" match is for anything but alternate spaces.)

```
// Get a color convert action
var toRGB = this.getColorConvertAction();

// Set up the action for a conversion to RGB
toRGB.matchAttributesAny = -1;
toRGB.matchSpaceTypeAny = ~toRGB.constants.spaceFlags.AlternateSpace;
toRGB.matchIntent = toRGB.constants.renderingIntents.Any;
toRGB.convertProfile = "Apple RGB";
toRGB.convertIntent = toRGB.constants.renderingIntents.Document;
toRGB.embed = true;
toRGB.preserveBlack = false;
toRGB.useBlackPointCompensation = true;
toRGB.action = toRGB.constants.actions.Convert;

// Convert the first page of the document
var result = this.colorConvertPage(0,[toRGB],[]);
```

getDataObject

5.0			

Obtains a specific `Data` object. See also `dataObjects`, `createDataObject`, `exportDataObject`, `importDataObject`, and `removeDataObject`.

Parameters

`cName`	The name of the `data` object to obtain.

Returns

The `Data` object corresponding to the specified name.

Example

Get a specific file attachment, and write various information to the console.

```
var MyData = this.getDataObject("MyData");
console.show(); console.clear();
for (var i in MyData) console.println("MyData." + i + "=" + MyData[i]);
```

getDataObjectContents

7.0			

Allows access to the contents of the file attachment associated with a DataObject.

Parameters

`cName`	The name associated with the `Data` object to get.
`bAllowAuth`	(optional) The default value is `false`. If `true`, a dialog box is used to obtain user authorization. Authorization may be required if the data object was encrypted using `encryptForRecipients`. Authorization dialog boxes are allowed if `bAllowAuth` is `true`.

Returns

`ReadStream` object

Related objects, properties, and methods are `dataObjects`, `getDataObject`, `openDataObject`, `createDataObject`, `importDataObject`, `setDataObjectContents`, and `removeDataObject`, and the `Data` object.

Example

This code is part of a circulating memo. A PDF file is circulated among members on an email list. Each recipient enters a budget figure, then forwards the document to the next person on the list. Before the document is sent, the budget number is appended to an embedded tab-delimited document, `budget.xls`, an attachment to this document. The last recipient can open the attachment, `budget.xls`, in a spreadsheet application to view the various budget numbers.

```
// Get the name and department of the current recipient
var firstName = this.getField("Name.First").value;
var lastName =  this.getField("Name.Last").value;
var deptName =  this.getField("Dept.Name").value;
// Get the budget number
var deptBudget =  this.getField("Dept.Budget").value;
if ( app.viewerVersion >= 7 ) {
   // Get the file stream object of the embedded file
   var oFile = this.getDataObjectContents("budget.xls");
```

```
    // Convert to a string
    var myBudget = util.stringFromStream(oFile, "utf-8");
    // Append current data to the end, using tabs to separate info
    var myBudget = myBudget + "\r\n" + firstName
       + "\t" + lastName + "\t" + deptName + "\t" + deptBudget;
    // Convert back to a file stream
    var oFile = util.streamFromString(myBudget, "uft-8");
    // Now "overwrite" budget.xls
    this.setDataObjectContents("budget.xls", oFile);
} else {
     app.alert("Acrobat 7.0 or later is required."
        + " Your budget data will not be included. "
        + "Will e-mail on to the next correspondent, sorry. "
        + "Send in your budget request using traditional methods.");
}
```

The rest of the code, not shown, saves the document and sends it to the next person on the mailing list.

This example uses `getDataObjectContents`, `setDataObjectContents`, `util.stringFromStream`, and `util.streamFromString`.

getField

3.01			

Maps a Field object in the PDF document to a JavaScript variable.

Beginning with Acrobat 6.0, this method can return the Field object of an individual widget. For more information, see `Field` object.

Parameters

`cName`	The name of the field of interest.

Returns

A Field object representing a form field in the PDF document.

Example 1

Make a text field multiline and triple its height

```
var f = this.getField("myText");
var aRect = f.rect;                 // Get bounding rectangle
f.multiline = true;                 // Make it multiline
var height = aRect[1]-aRect[3];     // Calculate height
aRect[3] -= 2* height;              // Triple the height of the text field
f.rect = aRect;                     // and make it so
```

Example 2 (Acrobat 6.0)

Attach a JavaScript action to an individual widget, in this case, a radio button:

```
var f = this.getField("myRadio.0");
f.setAction("MouseUp",
   "app.alert('Thanks for selecting the first choice.');");
```

Example 3

List all properties of a field. This technique can be used to programmatically duplicate a field and its properties.

```
f = this.getField("myField");
for ( var i in f ) {
   try {
      if ( typeof f[i] != "function" )   // Do not list field methods
         console.println( i + ":" + f[i] )
   } catch(e) {}       // An exception occurs when we get a property that
}                      // does not apply to this field type.
```

getIcon

5.0			

Obtains a specific `icon` object. See also the `icons` property, the `addIcon`, `importIcon`, and `removeIcon` methods, and the Field object methods `buttonGetIcon`, `buttonImportIcon`, and `buttonSetIcon`.

Parameters

`cName`	The name of the `icon` object to obtain.

Returns

An `Icon` object associated with the specified name in the document or `null` if no icon of that name exists.

Example

The following is a custom keystroke script from a combo box. The face names of the items in the combo box are the names of some of the icons that populate the document. As the user chooses different items from the combo box, the corresponding icon appears as the button face of the field "myPictures".

```
if (!event.willCommit) {
   var b = this.getField("myPictures");
   var i = this.getIcon(event.change);
   b.buttonSetIcon(i);
}
```

See the Field object `buttonSetIcon` method or a more elaborate variation on this example.

getLegalWarnings

6.0			

Returns the legal warnings for this document in the form of an object with entries for each warning that has been found in the document.

Note: In versions of Acrobat previous to 8.0, `Document.getLegalWarnings` would dirty the document.

The process that analyzes a file to determine this list of warnings is not available in Adobe Reader.

Parameters

`bExecute`	if `true`, will cause the file to be examined and all detected warnings will be returned. In Acrobat 8, this examination is done by running a PDF/SigQ conformance check. If `false`, the default value, the warnings that have been embedded in the file, along with the certifier's attestation (if any) will be returned. In Acrobat 6 and 7, legal warnings can be embedded in a file at the time of certifying (using `cLegalAttest` of the Field object method `signatureSign`). In Acrobat 8, the certifier may still embed an attestation, but not the warning themselves. To obtain this attestation, call this method with `bExecute=false`.

Returns

A DocLegalWarning object containing property names and values of legal warnings. The value of each entry is the number of occurrences of this warning in the document. If `bExecute` is `false`, refer to *PDF Reference* version 1.7 for a list of possible property names. If `bExecute` is `true`, the property names correspond to PDF/SigQ level A violations listed below. Note that the warnings listed in *PDF Reference* version 1.7 intersects but significantly differ from the list below.

DocLegalWarning object

The following properties describe the PDF/SigQ1-A Violations.

Property	Description
`AlternateImages`	Image XObject must not contain an alternate version.
`Annotations`	The document contains comments. The visual appearances of the comments may change based on external variables.
`CatalogHasAA`	The document contains hidden actions that may not be intended or known by the end user. Actions include JavaScript actions (document open, save, etc.), playing multimedia, executing a menu item, and so on.
`CatalogHasOpenAction`	The document contains hidden actions that will be launched on open. These actions may not be intended or known by the end user. Actions include JavaScript actions (document open, save, etc.), playing multimedia, executing a menu item, and so on.

Property	Description
DevDepGS_FL	The extended graphic state of the document uses the FL key. The key is a number that indicates how much flatness tolerance should exist when drawing objects. Content may display differently from Acrobat to other applications.
DevDepGS_TR	The document uses a PDF transfer function that interprets and replaces color. For example, it could replace black with white.
DocHasCryptFilter	Some or all of the content is encrypted and the encryption method is not available in standard Acrobat installations. For example, the document may be protected by LiveCycle Policy Server. The document contains streams encrypted using the crypt filter.
DocHasNonSigField	The document contains non-signature form fields. The visual appearance of such fields may change based on external variables.
DocHasPresentation	Presentations are not allowed since a presentation may contain animations or other elements that may change document appearance or behavior.
DocHasPSXObj	Visual elements may change based on external variables. For example, a logo may change color based on time or zoom level. No PostScript XObjects allowed.
DocHasXFA	XFA-based (dynamic forms) documents are not allowed since such forms could alter the document's appearance or behavior.
DynamicSigAP	The document contains signed signature fields that may change their visual appearance based on external variables.
ExternalOPIdicts	The document links to images not in the PDF file that are used as alternates. For example, an alternate, high resolution image might be specified for printing. Images and form XObject must not contain an OPI alternate version.
ExternalRefXObjects	Document links to images not in the PDF file. No external XObjects allowed.
ExternalStreams	Document contains external streams. The author has flagged some PDF bytes as a stream which may get data from an external source.
GoTo3DViewActions	The document contains Go To 3D View actions that may be used to change the document's visual appearance through manipulating 3D views without the user's knowledge.
GoToEHasF	The document links to external PDF documents on the Internet, file system, or network and it has no control over the nature of that linked content. Embedded Go To actions must not refer to external hierarchies.
GoToRemoteAction	The document contains Go To actions that may link to external content.
InvalidEOF	The PDF file contains extra bytes after the PDF's end of file marker.

Property	Description
DevDepGS_FL	The extended graphic state of the document uses the FL key. The key is a number that indicates how much flatness tolerance should exist when drawing objects. Content may display differently from Acrobat to other applications.
DevDepGS_TR	The document uses a PDF transfer function that interprets and replaces color. For example, it could replace black with white.
DocHasCryptFilter	Some or all of the content is encrypted and the encryption method is not available in standard Acrobat installations. For example, the document may be protected by LiveCycle Policy Server. The document contains streams encrypted using the crypt filter.
DocHasNonSigField	The document contains non-signature form fields. The visual appearance of such fields may change based on external variables.
DocHasPresentation	Presentations are not allowed since a presentation may contain animations or other elements that may change document appearance or behavior.
DocHasPSXObj	Visual elements may change based on external variables. For example, a logo may change color based on time or zoom level. No PostScript XObjects allowed.
DocHasXFA	XFA-based (dynamic forms) documents are not allowed since such forms could alter the document's appearance or behavior.
DynamicSigAP	The document contains signed signature fields that may change their visual appearance based on external variables.
ExternalOPIdicts	The document links to images not in the PDF file that are used as alternates. For example, an alternate, high resolution image might be specified for printing. Images and form XObject must not contain an OPI alternate version.
ExternalRefXObjects	Document links to images not in the PDF file. No external XObjects allowed.
ExternalStreams	Document contains external streams. The author has flagged some PDF bytes as a stream which may get data from an external source.
GoTo3DViewActions	The document contains Go To 3D View actions that may be used to change the document's visual appearance through manipulating 3D views without the user's knowledge.
GoToEHasF	The document links to external PDF documents on the Internet, file system, or network and it has no control over the nature of that linked content. Embedded Go To actions must not refer to external hierarchies.
GoToRemoteAction	The document contains Go To actions that may link to external content.
InvalidEOF	The PDF file contains extra bytes after the PDF's end of file marker.

Property	Description
`InvalidFileHeader`	The PDF file contains extra bytes before the PDF's file header.
`JavaScriptActions`	The document contains JavaScript actions that may be launched without the user's knowledge.
`LaunchActions`	The document contains Launch File Attachment actions.
`MalformedContentStm`	Malformed drawing instructions: Syntax error. The page content violates the grammar for page content definition. For example, the instruction might specify drawing a square but the syntax for doing it is incorrect.
`MovieActions`	The document contains Launch Movie actions that may be launched without the user's knowledge.
`NonEmbeddedFonts`	Document contains non-embedded fonts. When the document opens on a system that does not have the requisite fonts, Acrobat will replace them with some other font. Users should always turn on font-related warnings.
`OptionalContent`	The content of the document is divided into layers that can be silently displayed or hidden on the fly.
`PageHasAA`	A page contains hidden actions that may not be intended or known by the end user. Actions include JavaScript actions (document open, save, etc.), playing multimedia, executing a menu item, and so on.
`RenditionActions`	The document contains rendition actions that may be used to launch movies without the user's knowledge.
`SetOCStateActions`	The document contains SetOCState actions that may be used to change the document's visual appearance by modifying layers' visibility without the user's knowledge.
`SigFieldHasAA`	A signature field contains actions that could be invoked by mouse over or other user interaction. Actions include JavaScript actions (document open, save, etc.), playing multimedia, executing a menu item, and so on.
`SigFieldHasAction`	A signature field contains actions that could be invoked by clicking. Actions include JavaScript actions (document open, save, etc.), playing multimedia, executing a menu item, and so on.
`SoundActions`	The document contains launch sound actions.
`TrueTypeFonts`	This document uses TrueType fonts. TrueType and TrueType-based OpenType fonts are not allowed because they are programs and may change the document's appearance based on external variables. This restriction is not required by PDF/SigQ and is not reported unless the preference setting security\DigSig\bTrueTypeFontPDFSigQWarn is set to 1.

Property	Description
UnknownNamedAction	The document contains named actions that may launch menu items without the user's knowledge.
UnknownPDFContent	Unrecognized PDF content: The document contains PDF content or custom content not supported by the current version of Acrobat. The document may have been created by a later version of Acrobat (PDF 1.8 or above).
UnknownPDFContentStmOp	Unrecognized drawing operator: The document contains PDF content or custom content not supported by the current version of Acrobat. The document may have been created by a later version of Acrobat.
URIActions	The document contains Launch URI actions that links to external content.
XObjHasInterpolate	The document author has enabled image interpolation. No image interpolation is allowed.

Example

Process a document and get legal PDF warnings.

```
var w = this.getLegalWarnings( true );
console.println( "Actual Legal PDF Warnings:" );
for(i in w) console.println( i + " = " + w[i] );

var w1 = this.getLegalWarnings( false );
console.println( "Declared Legal PDF Warnings:" );
for(i in w1) console.println( i + " = " + w1[i] );

// For a certification signature, note also if annotations are
// allowed by MDP settings

var f = this.getField( "AuthorSig" );
var s = f.signatureInfo();
if( s.mdp == "defaultAndComments" )
   console.println( "Annotations are allowed" );

// What does the author have to say about all this?

console.println( "Legal PDF Attestation:" );
console.println( w1.Attestation );
```

getLinks

6.0			

Gets an array of `Link` objects that are enclosed within specified coordinates on a page. See also `addLink` and `removeLinks`.

Parameters

`nPage`	The page that contains the `Link` objects. The first page is 0.
`oCoords`	An array of four numbers in rotated user space, the coordinates of a rectangle listed in the following order: upper-left *x*, upper-left *y*, lower-right *x* and lower-right *y*.

Returns

An array of `Link` objects.

Example

Count the number of links in a document and report to the console.

```
var numLinks=0;
for ( var p = 0; p < this.numPages; p++)
{
   var b = this.getPageBox("Crop", p);
   var l = this.getLinks(p, b);
   console.println("Number of Links on page " + p +" is " + l.length);
   numLinks += l.length;
}
console.println("Number of Links in Document is " + numLinks);
```

getNthFieldName

4.0			

Gets the name of the *n*th field in the document. See also `numFields`.

Parameters

`nIndex`	The index of the field whose name should be obtained.

Returns

The name of the field in the document.

Example

Enumerate through all of the fields in the document.

```
for (var i = 0; i < this.numFields; i++)
   console.println("Field[" + i + "] = " + this.getNthFieldName(i));
```

getNthTemplate

Note: This method is superseded by the `templates` property, the `getTemplate` method, and the `Template` object.

Gets the name of the *n*th template within the document.

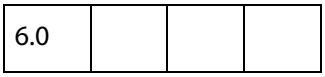
Parameters

`nIndex`	The index of the template to obtain.

Returns

The name of the specified template.

getOCGs



Gets an array of `OCG` objects found on a specified page.

Related methods are `getOCGOrder` and `setOCGOrder`, and the `OCG` object.

Parameters

`nPage`	(optional) The 0-based page number. If not specified, all the OCGs found in the document are returned. If no argument is passed, returns all OCGs listed in alphabetical order, by name. If `nPage` is passed, this method returns the OCGs for that page, in the order they were created.

Returns

An array of `OCG` objects or `null` if no OCGs are present.

Example

Turn on all the OCGs on the given document and page.

```
function TurnOnOCGsForPage(doc, nPage)
{
   var ocgArray = doc.getOCGs(nPage);
   for (var i=0; i < ocgArray.length; i++)
      ocgArray[i].state = true;
}
```

getOCGOrder

7.0			

Returns this document's OCGOrder array. This array represents how layers are displayed in the UI.

Related methods are `getOCGs` and `setOCGOrder`, and the `OCG` object.

Returns

An array containing OCG objects, strings, and similar subarrays, or `null` if no OCGs are present.

See `setOCGOrder` for a description of the order array.

getPageBox

5.0			

Gets a rectangle in rotated user space that encompasses the named box for the page. See also `setPageBoxes`.

Parameters

`cBox`	(optional) The type of box. Values are:
	`Art`
	`Bleed`
	`BBox`
	`Crop (default)`
	`Trim`
	For definitions of these boxes see the *PDF Reference* version 1.7.

`nPage`	(optional) The 0-based index of the page. The default is 0, the first page in the document.

Returns

A rectangle in rotated user space that encompasses the named box for the page.

Example

Get the dimensions of the Media box.

```
var aRect = this.getPageBox("Media");
var width = aRect[2] - aRect[0];
var height = aRect[1] - aRect[3];
console.println("Page 1 has a width of " + width + " and a height of "
   + height);
```

getPageLabel

5.0			

Gets page label information for the specified page.

Parameters

`nPage`	(optional) The 0-based index of the page. The default is 0, the first page in the document.

Returns

Page label information for the specified page.

Example

See `setPageLabels` for an example.

getPageNthWord

5.0		S	

Gets the *n*th word on the page.

See also `getPageNumWords` and `selectPageNthWord`.

Note: This method throws an exception if the document security is set to prevent content extraction.

Parameters

`nPage`	(optional) The 0-based index of the page. The default is 0, the first page in the document.
`nWord`	(optional) The 0-based index of the word. The default is 0, the first word on the page.
`bStrip`	(optional) Specifies whether punctuation and white space should be removed from the word before returning. The default is `true`.

Returns

The *n*th word on the page.

Example

See Example 2 of `spell.checkWord` for an example.

getPageNthWordQuads

5.0		S	

Gets the quads list for the *n*th word on the page. The `quads` property of the `Annotation` object can be used for constructing text markup, underline, strikeout, highlight and squiggly annotations. See also `getPageNthWord`, `getPageNumWords`, and `selectPageNthWord`.

Note: This method throws an exception if the document security is set to prevent content extraction.

Parameters

`nPage`	(optional) The 0-based index of the page. The default is 0, the first page in the document.
`nWord`	(optional) The 0-based index of the word. The default is 0, the first word on the page.

Returns

The quads list for the *n*th word on the page.

Example

Underline the fifth word on the second page of a document.

```
var annot = this.addAnnot({
   page: 1,
   type: "Underline",
   quads:  this.getPageNthWordQuads(1, 4),
   author: "A. C. Robat",
   contents: "Fifth word on second page"
});
```

See `spell.checkWord` for an additional example.

getPageNumWords

5.0			

Gets the number of words on the page.

See also `getPageNthWord`, `getPageNthWordQuads`, and `selectPageNthWord`.

Parameters

`nPage`	(optional) The 0-based index of the page. The default is 0, the first page in the document.

Returns

The number of words on the page.

Example

Count the number of words in a document

```
var cnt=0;
for (var p = 0; p < this.numPages; p++)
   cnt += getPageNumWords(p);
console.println("There are " + cnt + " words in this doc.");
```

See Example 2 of `spell.checkWord` for an additional example.

getPageRotation

5.0			

Gets the rotation of the specified page. See also `setPageRotations`.

Parameters

`nPage`	(optional) The 0-based index of the page. The default is 0, the first page in the document.

Returns

The rotation value of 0, 90, 180, or 270.

getPageTransition

5.0			

Gets the transition of the specified page. See also `setPageTransitions`.

Parameters

`nPage`	(optional) The 0-based index of the page. The default is 0, the first page in the document.

Returns

An array of three values: `[ nDuration, cTransition, nTransDuration ]`.

- `nDuration` is the maximum amount of time the page is displayed before the viewer automatically turns to the next page. A duration of -1 indicates that there is no automatic page turning.
- `cTransition` is the name of the transition to apply to the page. See the property `app.fs.transitions` for a list of valid transitions.
- `cTransDuration` is the duration (in seconds) of the transition effect.

getPrintParams

6.0			

Gets a `PrintParams` object that reflects the default print settings. See the `print` method, which now takes the `PrintParams` object as its parameter.

Returns

A `PrintParams` object.

Example

Get the `PrintParams` object of the default printer.

```
var pp = this.getPrintParams();
pp.colorOverride = pp.colorOverrides.mono; // Set some properties
this.print(pp); // Print
```

getSound

5.0			

Gets the `sound` object corresponding to the specified name. See also `sounds`, `importSound`, `deleteSound`, and the `Sound` object.

Parameters

`cName`	The name of the object to obtain.

Returns

The `Sound` object corresponding to the specified name.

Example

Play a sound.

```
var s = this.getSound("Moo");
console.println("Playing the " + s.name + " sound.");
s.play();
```

getTemplate

5.0			

Gets the named template from the document. See also `templates`, `createTemplate`, `removeTemplate`, and the `Template` object.

Parameters

`cName`	The name of the template to retrieve.

Returns

The `Template` object or `null` if the named template does not exist in the document.

Example

Try to get a particular template and determine if it is hidden or visible.

```
var t = this.getTemplate("myTemplate");
if ( t != null ) console.println( "myTemplate exists and is "
   + eval( '( t.hidden) ? "hidden" : "visible"' ) + ".");
else console.println( "myTemplate is not present!");
```

getURL

4.0	D	S	X

Gets the specified URL over the Internet using a GET. If the current document is being viewed inside the browser or Acrobat Web Capture is not available, the method uses the Acrobat Weblink plug-in to retrieve the requested URL. If running inside Acrobat, the method gets the URL of the current document either from the `baseURL`, from the URL of the first page (page 0) if the document was obtained by Web Capture, or from the file system.

Note: This method does not support URLs that begin with either scheme name `javascript` or `file`.

Note: This method is not available for Adobe Reader when the `bAppend` parameter is set to `true`.

This method roughly corresponds to the "open a web page" action.

A related method is `app.launchURL`.

Parameters

`cURL`	A fully qualified URL or a relative URL. There can be a query string at the end of the URL.
`bAppend`	(optional) If `true` (the default), the resulting page or pages should be appended to the current document. This flag is considered to be `false` if the document is running inside the web browser, the Acrobat Web Capture plug-in is not available, or if the URL is of type `"file:///"`. **Note:** Beginning with Acrobat 6.0, if `bAppend` is `true`, the `getURL` method can only be executed during a console or batch event. See "Privileged versus non-privileged context" on page 32 for details.

Example

```
this.getURL("http://www.adobe.com/", false);
```

gotoNamedDest

3.01			

Goes to a named destination within the PDF document. For details on named destinations and how to create them, see the *PDF Reference* version 1.7.

Parameters

`cName`	The name of the destination within a document.

Example

Open a document, and go to a named destination within that document. The example assumes the document being opened by `openDoc` is `disclosed`.

```
// Open a new document
var myNovelDoc = app.openDoc("/c/fiction/myNovel.pdf");
// Go to a destination in this new doc
myNovelDoc.gotoNamedDest("chapter5");
// Close the old document
this.closeDoc();
```

See Example 6 (Acrobat 8.0) following `openDoc` on page 133 for a more efficient way of performing this same task.

importAnFDF

4.0	D		F

Imports the specified FDF file. See also `importAnXFDF` and `importTextData`.

Parameters

`cPath`	(optional) The device-independent path to the FDF file. It should look like the value of the F entry in an FDF file exported with the `submitForm` method or with the Forms > Manage Form Data > Export Data From Form menu item. The path may be relative to the location of the current document. If this parameter is omitted, a dialog box is shown to let the user select the file.

Example

The following code, which is an action of a Page Open event, checks whether a certain function, `ProcResponse`, is already defined, if not, it installs a document-level JavaScript, which resides in an FDF file.

```
if(typeof ProcResponse == "undefined") this.importAnFDF("myDLJS.fdf");
```

Here, the path is a relative one. This technique may be useful for automatically installing document-level scripts for PDF files distilled from a PostScript file.

importAnXFDF

5.0	D		F

Imports the specified XFDF file containing XML form data.

XFDF is an XML representation of Acrobat form data. See the document *XML Form Data Format (XFDF) Specification* (see "Related documentation" on page 28).

See also `exportAsXFDF`, `importAnFDF` and `importTextData`.

Parameters

`cPath`	(optional) The device-independent path to the XFDF file. The path may be relative to the location of the current document. If the parameter is omitted, a dialog box is shown to let the user select the file.

importDataObject

5.0	D	S	

Imports an external file into the document and associates the specified name with the `data` object. Data objects can later be extracted or manipulated.

Related objects, properties, and methods are `dataObjects`, `getDataObject`, `openDataObject`, `createDataObject`, `exportDataObject`, `importDataObject`, `getDataObjectContents`, and `setDataObjectContents`, and the `Data` object.

Note: If the `cDIPath` parameter is specified, this method can only be executed during a batch or console event, or through an external call (for example, OLE). See "Privileged versus non-privileged context" on page 32 for details. See the `event` object for a discussion of JavaScript events.

When a file attachment is imported using `importDataObject`, the value of its `Data.name` is assigned by the parameter `cName`. However, when a file is attached using the UI, its `name` is automatically assigned. The attachments are assigned the sequential names "Untitled Object", "Untitled Object 2", "Untitled Object 3", and so on.

Parameters

`cName`	The name to associate with the data object.
`cDIPath`	(optional) A device-independent path to a data file on the user's hard drive. This path may be absolute or relative to the current document. If not specified, the user is prompted to locate a data file.
`cCryptFilter`	(optional, Acrobat 6.0) The language-independent name of a crypt filter to use when encrypting this data object. This crypt filter must have previously been added to the document's list of crypt filters, using the Doc `addRecipientListCryptFilter` method, otherwise an exception will be thrown. To leave this data object unencrypted in a file that is encrypted by the Doc `encryptForRecipients` method, the predefined Identity crypt filter can be used.

Returns

`true` on success. An exception is thrown on failure.

Example

Attach two files into current document, and write all Data object information to the console.

```
function DumpDataObjectInfo(dataobj)
{
   for (var i in dataobj)
      console.println(dataobj.name + "[" + i + "]=" + dataobj[i]);
}
// Prompt the user for a data file to embed.
this.importDataObject("MyData");
DumpDataObjectInfo(this.getDataObject("MyData"));
// Embed Foo.xml (found in the parent directory for this doc).
this.importDataObject("MyData2", "../Foo.xml");
DumpDataObjectInfo(this.getDataObject("MyData2"));
```

importIcon

5.0	D	S	

Imports an icon into the document and associates it with the specified name.

See also `icons`, `addIcon`, `getIcon`, `removeIcon`, the Field object methods `buttonGetIcon`, `buttonImportIcon`, `buttonSetIcon`, and the `Icon` object.

Beginning with version 6.0, Acrobat will first attempt to open `cDIPath` as a PDF file. On failure, Acrobat will try to convert `cDIPath` to PDF from one of the known graphics formats (BMP, GIF, JPEG, PCX, PNG, TIFF) and then import the converted file as a button icon.

Note: If `cDIPath` is specified, this method can only be executed during a batch or console event. See "Privileged versus non-privileged context" on page 32 for details. The `event` object contains a discussion of Acrobat JavaScript events.

Parameters

`cName`	The name to associate with the icon.
`cDIPath`	(optional) A device-independent path to a PDF file on the user's hard drive. This path may be absolute or relative to the current document. `cDIPath` may only be specified in a batch environment or from the console. If not specified, the `nPage` parameter is ignored and the user is prompted to locate a PDF file and browse to a particular page.
`nPage`	(optional) The 0-based index of the page in the PDF file to import as an icon. The default is 0.

Returns

An integer code indicating whether it was successful or not:

`0` — No error

`1` — The user cancelled the dialog box

`-1` — The selected file could not be opened

`-2` — The selected page was invalid

Example

This function is useful to populate a document with a series of named icons for later retrieval. For example, an author may want a picture of a list box state to appear next to the list box when the user selects the state in a list box. Without this function, it could be done by using a number of fields that could be hidden and shown. However, this is difficult to author. Instead, the appropriate script might be something like this:

```
var f = this.getField("StateListBox");
var b = this.getField("StateButton");
b.buttonSetIcon(this.getIcon(f.value));
```

This uses a single field to perform the same effect.

A simple user interface can be constructed to add named icons to a document. Assume the existence of two fields: a field called `IconName` that will contain the icon name and a field called `IconAdd` that will add the icon to the document. The mouse-up script for `IconAdd` would be:

```
var t = this.getField("IconName");
this.importIcon(t.value);
```

The same kind of script can be applied in a batch setting to populate a document with every selected icon file in a folder.

importSound

5.0	D	S	

Imports a sound into the document and associates the specified name with the sound.

Note: If `cDIPath` is specified, this method can only be executed during a batch or console event. See "Privileged versus non-privileged context" on page 32 for details. The `event` object contains a discussion of JavaScript events.

Parameters

`cName`	The name to associate with the sound object.
`cDIPath`	(optional) A device-independent path to a sound file on the user's hard drive. This path may be absolute or relative to the current document. If not specified, the user is prompted to locate a sound file.

Example

Import two sounds and play them.

```
this.importSound("Moo");
this.getSound("Moo").play();
this.importSound("Moof", "./moof.wav");
this.getSound("Moof").play();
```

See also `sounds`, `getSound`, `deleteSound`, and the `Sound` object.

importTextData

5.0	D	S	F

Imports a row of data from a text file. Each row must be *tab delimited*. The entries in the first row of the text file are the column names of the tab delimited data. These names are also field names for text fields present in the PDF file. The data row numbers are 0-based; that is, the first row of data is row zero (this does not include the column name row). When a row of data is imported, each column datum becomes the field value of the field that corresponds to the column to which the data belongs.

See also the export version of this method, `exportAsText`.

Note: (Acrobat 8.0) If `cPath` is specified, this method can only be executed during batch and console events. See "Privileged versus non-privileged context" on page 32 for details. The `event` object contains a discussion of JavaScript events.

Parameters

`cPath`	(optional) A relative device-independent path to the text file. If not specified, the user is prompted to locate the text data file.
`nRow`	(optional) The 0-based index of the row of the data to import, not counting the header row. If not specified, the user is prompted to select the row to import.

Returns

An integer return code.

Return code	Description
-3	Warning: Missing Data
-2	Warning: User Cancelled Row Select
-1	Warning: User Cancelled File Select
0	No Error
1	Error: Cannot Open File
2	Error: Cannot Load Data
3	Error: Invalid Row

Example 1

In this example, there are text fields named "First", "Middle", and "Last", and a data file whose first row consists of the three strings, "First", "Middle", and "Last", separated by tabs, along with four additional rows of tab-separated name data.

```
First          Middle         Last
A.             C.             Robat
T.             A.             Croba
A.             T.             Acrob
B.             A.             Tacro
// Import the first row of data from "myData.txt".
this.importTextData("/c/data/myData.txt", 0)
```

Example (continued)

The following code is a mouse-up action for a button. Clicking on the button cycles through the text file and populates the three fields "First", "Middle", and "Last" with the name data.

```
if (typeof cnt == "undefined") cnt = 0;
   this.importTextData("/c/data/textdata.txt", cnt++ % 4)
```

The same functionality can be obtained using the ADBC object and associated properties and methods. The data file can be a spreadsheet or a database.

importXFAData

6.0	D	S	F

Imports the specified XFA file. See also importAnXFDF and importTextData.

Note: This method is only allowed in batch and console events. See "Privileged versus non-privileged context" on page 32 for details.

Parameters

cPath	(optional) The device-independent path of the XFA file. The path may be relative to the location of the current document. If this parameter is omitted, a dialog box is shown to let the user select the file.

insertPages

5.0	D	S	X

Inserts pages from the source document into the current document. If a page range is not specified, the method gets all pages in the source document.

See also deletePages and replacePages.

Note: This method can only be executed during batch and console events. See "Privileged versus non-privileged context" on page 32 for details. The event object contains a discussion of JavaScript events.

Parameters

`nPage`	(optional) The 0-based index of the page after which to insert the source document pages. Use -1 to insert pages before the first page of the document.
`cPath`	The device-independent path to the PDF file that will provide the inserted pages. The path may be relative to the location of the current document.
`nStart`	(optional) A 0-based index that defines the start of an inclusive range of pages in the source document to insert. If only `nStart` is specified, the range of pages is the single page specified by `nStart`.
`nEnd`	(optional) A 0-based index that defines the end of an inclusive range of pages in the source document to insert. If only `nEnd` is specified, the range of pages is 0 to `nEnd`.

Example

Insert a cover page to the current document.

```
this.insertPages ({
   nPage: -1,
   cPath: "/c/temp/myCoverPage.pdf",
   nStart: 0
});
```

mailDoc

4.0			S

Saves the current PDF document and mails it as an attachment to all recipients, with or without user interaction.

See also `mailForm`, `app.mailGetAddrs`, `app.mailMsg`, the `FDF` object `mail` method and the `Report` object `mail` method.

Note: (Acrobat 7.0) When this method is executed in a non-privileged context, the `bUI` parameter is not honored and defaults to `true`. See "Privileged versus non-privileged context" on page 32 for details.

(Save Rights) For Adobe Reader 5.1 and later, this method is allowed, but document Save rights are required in case the document is changed.

On Windows, the client computer must have its default mail program configured to be MAPI enabled to use this method.

Parameters

`bUI`	(optional) If `true` (the default), the rest of the parameters are used in a compose-new-message window that is displayed to the user. If `false`, the `cTo` parameter is required and all others are optional. **Note:** (Acrobat 7.0) When this method is executed in a non-privileged context, the `bUI` parameter is not honored and defaults to `true`. See "Privileged versus non-privileged context" on page 32.
`cTo`	(optional) The semicolon-delimited list of recipients for the message.
`cCc`	(optional) The semicolon-delimited list of CC recipients for the message.
`cBcc`	(optional) The semicolon-delimited list of BCC recipients for the message.
`cSubject`	(optional) The subject of the message. The length limit is 64 KB.
`cMsg`	(optional) The content of the message. The length limit is 64 KB.

Example

Open the compose message window.

```
this.mailDoc(true);
```

Send email with the attached PDF file to `apstory@example.com` and `dpsmith@example.com`. Beginning with Acrobat 7.0, the code below would have to be executed in a privileged context if the `bUI` parameter (set to `false`) is to be honored.

```
this.mailDoc({
   bUI: false,
   cTo: "apstory@example.com",
   cCC: "dpsmith@example.com",
   cSubject: "The Latest News",
   cMsg: "A.P., attached is my latest news story in PDF."
});
```

mailForm

4.0			F

Exports the form data and mails the resulting FDF file as an attachment to all recipients, with or without user interaction. The method does not support signed signature fields.

See also `mailDoc`, `app.mailGetAddrs`, `app.mailMsg`, the `FDF` object `mail` method and the `Report` object `mail` method.

Note: On Windows, the client machine must have its default mail program configured to be MAPI enabled to use this method.

Parameters

`bUI`	If `true`, the rest of the parameters are used in a compose-new-message window that is displayed to the user. If `false`, the `cTo` parameter is required and all others are optional. **Note:** (Acrobat 7.0) When this method is executed in a non-privileged context, the `bUI` parameter is not honored and defaults to `true`. See "Privileged versus non-privileged context" on page 32.
`cTo`	(required if `bUI` is `true`) A semicolon-delimited list of recipients for the message.
`cCc`	(optional) A semicolon-delimited list of CC recipients for the message.
`cBcc`	(optional) A semicolon-delimited list of BCC recipients for the message.
`cSubject`	(optional) The subject of the message. The length limit is 64 KB.
`cMsg`	(optional) The content of the message. The length limit is 64 KB.

Example

Open the compose message window.

```
this.mailForm(true);
```

Send the mail with the attached FDF file to `fun1@example.com` and `fun2@example.com`.

```
this.mailForm(false, "fun1@example.com; fun2@example.com", "", "",
   "This is the subject", "This is the body of the mail.");
```

movePage

5.0	D		X

Moves a page within the document.

Parameters

`nPage`	(optional) The 0-based index of the page to move. The default is 0.
`nAfter`	(optional) The 0-based index of the page after which to move the specified page. Use -1 to move the page before the first page of the document. The default is the last page in the document.

Example

Reverse the pages in the document.

```
for (i = this.numPages - 1; i >= 0; i--) this.movePage(i);
```

newPage

6.0	D	S	X

Adds a new page to the active document.

Note: This method can only be executed during batch and console events. See "Privileged versus non-privileged context" on page 32 for details.

Parameters

`nPage`	(optional) The page after which to add the new page in a 1-based page numbering system. The default is the last page of the document. Use 0 to add a page before the first page. An invalid page range is truncated to the valid range of pages.
`nWidth`	(optional) The width of the page in points. The default value is `612`.
`nHeight`	(optional) The height of the page in points. The default value is `792`.

Example

Add a new page to match the page size of the doc.

```
var Rect = this.getPageBox("Crop");
this.newPage(0, Rect[2], Rect[1]);
```

openDataObject

7.0			

Returns the Doc of a PDF document that is an embedded data object (an attachment) within the document that this method is being called for.

The method can throw an exception instead of returning a Doc if any of the following conditions are true:

- The document that this method is being called for does not contain the requested embedded data object.
- The data object is not a PDF document.
- Permissions forbid opening attachments by means of JavaScript.

The document should be closed (using `closeDoc`) after it is no longer needed.

Parameters

`cName`	The name of the data object.

The name of a data object is a property of the `Data` object. A name is given to the object when it is embedded, automatically by the Acrobat UI, or programmatically by the JavaScript methods `createDataObject` or `importDataObject`.

Returns

Doc or an exception is thrown.

Related objects, properties, and methods are `dataObjects`, `getDataObjectContents`, `setDataObjectContents`, `createDataObject`, and `importDataObject`, and the `Data` object.

Example

Open a PDF attachment and extract form data from it.

```
var oDoc = this.openDataObject("myAttachment");
try {
   var myField = this.getField("myTextField");
   // Get the value of "yourTextField" in PDF attachment
   var yourField = oDoc.getField("yourTextField");
   // View this value in "myTextField"
   myField.value = yourField.value;
   oDoc.closeDoc();
} catch(e) { app.alert("Operation failed");}
```

See also "Example 5 (Acrobat 7.0)" on page 349 following the `submitForm` method.

print

3.01		S	

Prints all or a specific number of pages of the document.

Beginning with Acrobat 6.0, the method can print the document using the settings contained in a `PrintParams` object, rather than through the other parameters. The permanent print settings are not altered.

Note: (Acrobat 6.0) When printing to a file, the path must be a safe path (see "Safe path" on page 31). The `print` method will not overwrite an existing file.

(Acrobat 7.0) Non-interactive printing can only be executed during batch, console, and menu events. Printing is made non-interactive by setting `bUI` to `false` or by setting the `interactive` property to `silent`, for example:

```
var pp = this.getPrintParams();
pp.interactive = pp.constants.interactionLevel.silent;
```

Outside of batch, console, and menu events, the values of `bUI` and of `interactive` are ignored and a print dialog box will always be presented.

See also "Privileged versus non-privileged context" on page 32.

Note: On a Windows platform, the file name must include an extension of `.ps` or `.prn` (case insensitive). Additionally, the `print` method will not create a file directly in the root directory, the windows directory, or the windows system directory.

An `InvalidArgsError` (see `Error` object) exception will be thrown and `print` will fail if any of the above security restrictions are not met.

Parameters

`bUI`	(optional) If `true` (the default), will cause a UI to be presented to the user to obtain printing information and confirm the action.
`nStart`	(optional) A 0-based index that defines the start of an inclusive range of pages. If `nStart` and `nEnd` are not specified, all pages in the document are printed. If only `nStart` is specified, the range of pages is the single page specified by `nStart`. If `nStart` and `nEnd` parameters are used, `bUI` must be `false`.
`nEnd`	(optional) A 0-based index that defines the end of an inclusive page range. If `nStart` and `nEnd` are not specified, all pages in the document are printed. If only `nEnd` is specified, the range of a pages is 0 to `nEnd`. If `nStart` and `nEnd` parameters are used, `bUI` must be `false`.
`bSilent`	(optional) If `true`, suppresses the cancel dialog box while the document is printing. The default is `false`.
`bShrinkToFit`	(optional, Acrobat 5.0) If `true`, the page is shrunk (if necessary) to fit within the imageable area of the printed page. If `false`, it is not. The default is `false`.
`bPrintAsImage`	(optional, Acrobat 5.0) If `true`, print pages as an image. The default is `false`.
`bReverse`	(optional, Acrobat 5.0) If `true`, print from `nEnd` to `nStart`. The default is `false`.
`bAnnotations`	(optional, Acrobat 5.0) If `true` (the default), annotations are printed.
`printParams`	(optional, Acrobat 6.0) The `PrintParams` object containing the settings to use for printing. If this parameter is passed, any other parameters are ignored.

Example 1

Print the current page.

```
this.print(false, this.pageNum, this.pageNum);
// Print a file silently
this.print({bUI: false, bSilent: true, bShrinkToFit: true});
```

Example 2 (Acrobat 6.0)

Print current document to a known printer.

```
var pp = this.getPrintParams();
pp.interactive = pp.constants.interactionLevel.automatic;
pp.printerName = "hp officejet d series";
this.print(pp);
```

Note: If `printerName` is an empty string and `fileName` is nonempty, the current document is saved to disk as a PostScript file.

Example 3 (Acrobat 6.0)

Save the current document as a PostScript file.

```
var pp = this.getPrintParams();
pp.fileName = "/c/temp/myDoc.ps";
pp.printerName = "";
this.print(pp);
```

removeDataObject

5.0	D		D

Deletes the data object corresponding to the specified name from the document.

Related objects, properties, and methods are dataObjects, getDataObject, openDataObject, createDataObject, removeDataObject, importDataObject, getDataObjectContents, and setDataObjectContents, and the Data object.

Parameters

cName	The name of the data object to remove.

The name of a data object is a property of the Data object. A name is given to the object when it is embedded, either automatically by the Acrobat UI or programmatically by the JavaScript methods createDataObject or importDataObject.

Example

```
this.removeDataObject("MyData");
```

removeField

5.0	D		F

Removes the specified field from the document. If the field appears on more than one page, all representations are removed.

Note: (Acrobat 6.0): Beginning with Acrobat 6.0, removeField can be used from within Adobe Reader for documents with forms usage rights.

Parameters

cName	The field name to remove.

Example

```
this.removeField("myBadField");
```

removeIcon

5.0	D		X

Removes the specified named icon from the document.

See also icons, addIcon, getIcon, and importIcon, the Field object methods buttonGetIcon, buttonImportIcon, and buttonSetIcon, and the Icon object.

Parameters

cName	The name of the icon to remove.

The name of the icon is a property of the Icon object. A name is given to the object either by importIcon, when the icon file is imported into the document, or by addIcon, which names an icon that is not in the document-level named icons tree.

Example

Remove all named icons from the document.

```
for ( var i = 0; i < this.icons.length; i++)
   this.removeIcon(this.icons[i].name);
```

removeLinks

6.0	D		X

If the user has permission to remove links from the document, removes all the links on the specified page within the specified coordinates

See also addLink, getLinks, and the Link object.

Parameters

nPage	The 0-based index of the page from which to remove links.
oCoords	An array of four numbers in rotated user space, the coordinates of a rectangle listed in the following order: upper-left *x*, upper-left *y*, lower-right *x*, and lower-right *y*.

Example

Remove all links from the document.

```
// Remove all links from the document
for ( var p = 0; p < this.numPages; p++)
{
   var b = this.getPageBox("Crop", p);
   this.removeLinks(p, b);
}
```

Use getLinks to help count the number of links removed.

removeRequirement

7.0.5	D	S	X

Removes an existing requirement present in a PDF document. Removing a requirement frees Acrobat from having to fulfill it to open the document. The document may not function properly if a requirement is removed.

Note: This method can only be called from a console or batch event.

Parameters

`cType`	The type of requirement to be removed. The types are described by the `Requirements Enumerator` object.

removeScript

7.0	D		X

Removes a document-level JavaScript, if permissions for script removal is granted.

Parameters

`cName`	A string that specifies the name of the script to be removed.

Returns

The value `undefined` on success. The method throws an exception if the script is not found.

Example

Add a document-level script, then remove it.

```
this.addScript("myScript", "app.alert('A.C. Robat welcomes you!')");
```

Now remove this script:

```
this.removeScript("myScript");
```

removeTemplate

5.0	D	S	X

Removes the named template from the document.

See also `templates`, `createTemplate`, `getTemplate`, and the `Template` object.

Note: This method can only be executed during a batch or console event. See "Privileged versus non-privileged context" on page 32 for details. See the `event` object for a discussion of JavaScript events.

Parameters

`cName`	The name of the template to remove.

The template name is a property of the `Template` object. A name is given to a template when it is created, either by the Acrobat UI or by the JavaScript method `getTemplate`.

removeThumbnails

5.0	D		X

Deletes thumbnails for the specified pages in the document. See also `addThumbnails`.

Parameters

`nStart`	(optional) A 0-based index that defines the start of an inclusive range of pages. If `nStart` and `nEnd` are not specified, operates on all pages in the document. If only `nStart` is specified, the range of pages is the single page specified by `nStart`.
`nEnd`	(optional) A 0-based index that defines the end of an inclusive range of pages. If `nStart` and `nEnd` are not specified, operates on all pages in the document. If only `nEnd` is specified, the range of pages is 0 to `nEnd`.

removeWeblinks

5.0	D		X

Scans the specified pages looking for links with actions to go to a particular URL on the web and deletes them. See also `addWeblinks`.

Note: This method only removes weblinks authored in the application using the UI. Web links that are executed through JavaScript (for example, using `getURL`) are not removed.

Parameters

`nStart`	(optional) A 0-based index that defines the start of an inclusive range of pages. If `nStart` and `nEnd` are not specified, operates on all pages in the document. If only `nStart` is specified, the range of pages is the single page specified by `nStart`.
`nEnd`	(optional) A 0-based index that defines the end of an inclusive range of pages. If `nStart` and `nEnd` are not specified, operates on all pages in the document. If only `nEnd` is specified, the range of pages is 0 to `nEnd`.

Returns

The number of web links removed from the document.

Example

Remove all web links from the document and report results to the console window.

```
var numWeblinks = this.removeWeblinks();
console.println("There were " + numWeblinks +
   " web links removed from the document.");
```

replacePages

5.0	D	S	X

Replaces pages in the current document with pages from the source document.

See also `deletePages`, `extractPages`, and `insertPages`.

Note: This method can only be executed during a batch or console event. See "Privileged versus non-privileged context" on page 32 for details. See the `event` object for a discussion of JavaScript events.

Parameters

`nPage`	(optional) The 0-based index of the page at which to start replacement. The default is 0.
`cPath`	The device-independent path to the PDF file that will provide the replacement pages. The path may be relative to the location of the current document.
`nStart`	(optional) A 0-based index that defines the start of an inclusive range of pages in the source document to be used for replacement. If `nStart` and `nEnd` are not specified, gets all pages in the source document. If only `nStart` is specified, the range of pages is the single page specified by `nStart`.
`nEnd`	(optional) A 0-based index that defines the end of an inclusive range of pages in the source document to be used for replacement. If `nStart` and `nEnd` are not specified, gets all pages in the source document. If only `nEnd` is specified, the range of pages is 0 to `nEnd`.

resetForm

3.01	D		F

Resets the field values within a document. Resetting a field causes it to take on its default value (which, in the case of text fields, is usually blank).

Note: If the form contains signature fields, signature rights are required to use the method in Adobe Reader.

Parameters

`aFields`	(optional) An array specifying the fields to reset. If not present or `null`, all fields in the form are reset. You can include non-terminal fields in the array.

Example 1

Select fields to be reset and reset them.

```
var fields = new Array();
fields[0] = "P1.OrderForm.Description";
fields[1] = "P1.OrderForm.Qty";
this.resetForm(fields);
```

The same fields can be reset using only one line of code:

```
this.resetForm(["P1.OrderForm.Description","P1.OrderForm.Qty"]);
```

Example 2

This example shows how to reset a whole subtree. For example, if you pass "name" as part of the fields array, all `name` fields, such as `name.first` and `name.last`, are reset.

```
this.resetForm(["name"]);
```

saveAs

5.0		S	S

Saves the file to the device-independent path specified by the required parameter, `cPath`. The file is not saved optimized for the web. Beginning with Acrobat 6.0, the document can be converted to another file type (other than PDF) and saved as specified by the value of the `cConvID` parameter.

Note: This method can only be executed during a batch or console event. See "Privileged versus non-privileged context" on page 32 for details. The `event` object contains a discussion of JavaScript events.

(Adobe Reader S): This method is available in Adobe Reader for documents that have Save usage rights.

Parameters

`cPath`	The device-independent path in which to save the file. **Note:** The parameter `cPath` must have a safe path (see "Safe path" on page 31) and an extension appropriate to the value of `cConvID`. See the Values of cConvID and Valid Extensions table below. This method will throw a `NotAllowedError` (see `Error` object) exception if these security conditions are not met, and the method will fail.
`cConvID`	(optional, Acrobat 6.0) A conversion ID string that specifies the conversion file type. Currently supported values for `cConvID` are listed by the `app.fromPDFConverters`. If `cConvID` is not specified, PDF is assumed.

`cFS`	(optional, Acrobat 7.0) A string that specifies the source file system name. Two values are supported: "" (the empty string) representing the default file system and "CHTTP". The default is the default file system. This parameter is only relevant if the web server supports WebDAV.
`bCopy`	(optional, Acrobat 7.0) A Boolean value which, if `true`, saves the PDF file as a copy. The default is `false`.
`bPromptToOverwrite`	(optional, Acrobat 7.0) A Boolean value which, if `true`, prompts the user if the destination file already exists. The default is `false`.

Returns

The value `undefined` is returned on success. An exception is thrown if an error occurs. For example, this method will throw a `NotAllowedError` (see `Error` object) if the user disallows an overwrite.

Note: Prior to Acrobat 7.0, this method had no return value.

Values of cConvID and Valid Extensions

cConvID	Valid extensions
`com.adobe.Acrobat.eps`	`eps`
`com.adobe.Acrobat.html-3-20`	`html, htm`
`com.adobe.Acrobat.html-4-01-css-1-00`	`html, htm`
`com.adobe.Acrobat.jpeg`	`jpeg ,jpg, jpe`
`com.adobe.Acrobat.jp2k`	`jpf,jpx,jp2,j2k,j2c,jpc`
`com.adobe.Acrobat.doc`	`doc`
`com.callas.preflight.pdfa`	`pdf`
`com.callas.preflight.pdfx`	`pdf`
`com.adobe.Acrobat.png`	`png`
`com.adobe.Acrobat.ps`	`ps`
`com.adobe.Acrobat.rtf`	`rft`
`com.adobe.Acrobat.accesstext`	`txt`
`com.adobe.Acrobat.plain-text`	`txt`
`com.adobe.Acrobat.tiff`	`tiff, tif`
`com.adobe.Acrobat.xml-1-00`	`xml`

Note: When the conversion ID corresponds to `jpeg`, `jp2k`, `png`, or `tiff`, this method saves each page individually under a file name obtained by appending `"_Page_#"` to the basename of the file name provided. For example, if the value of the `cPath` is `"/C/temp/mySaveAsDocs/myJPGs.jpg"`, the names of the files generated will be `myJPGs_Page_1.jpg`, `myJPGs_Page_2.jpg`, and so on.

Example 1

The following code, which could appear as a batch sequence, is an outline of a script. It assumes a PDF file containing form fields is open. The fields must be populated from a database and the document saved.

```
// code lines to read from a database and populate the form with data
// now save file to a folder; use customerID from database record
// as name
var row = statement.getRow();
.......
this.saveAs("/c/customer/invoices/" + row.customerID + ".pdf");
```

Example 2

You can use `newDoc` and `addField` to dynamically lay out a form, then populate it from a database and save.

```
var myDoc = app.newDoc()
// layout some dynamic form fields
// connect to database, populate with data, perhaps from a database
.........
// save the doc and/or print it; print it silently this time
// to default printer
myDoc.saveAs("/c/customer/invoices/" + row.customerID + ".pdf");
myDoc.closeDoc(true);        // close the doc, no notification
```

Example 3 (Acrobat 6.0)

Save the current document in rich text format:

```
this.saveAs("/c/myDocs/myDoc.rtf", "com.adobe.Acrobat.rtf");
```

See `fromPDFConverters` for a listing of supported conversion ID strings.

Example 3 (Acrobat 7.0)

Save the document to a WebDAV folder.

```
this.saveAs({
   cPath: "http://www.example.com/WebDAV/myDoc.pdf",
   bPromptToOverwrite: true,
   cFS: "CHTTP"
});
```

scroll

3.01			

Scrolls the specified point on the current page into the middle of the current view. These coordinates must be defined in rotated user space. See the *PDF Reference* version 1.7 for details.

Parameters

`nX`	The *x* coordinate for the point to scroll.
`nY`	The *y* coordinate for the point to scroll.

selectPageNthWord

5.0			

Changes the current page number and selects the specified word on the page.

See also `getPageNthWord`, `getPageNthWordQuads`, and `getPageNumWords`.

Parameters

`nPage`	(optional) The 0-based index of the page to operate on. The default is 0, the first page in the document.
`nWord`	(optional) The 0-based index of the word to obtain. The default is 0, the first word on the page.
`bScroll`	(optional) Specifies whether to scroll the selected word into the view if it is not already viewable. The default is `true`.

Example

Get and select a particular word.

```
// Get the 20th word on page 2 (page 1, 0-based)
var cWord = this.getPageNthWord(1, 20);
// Select that word (highlight) for the user to see, and change the page if
// necessary.
this.selectPageNthWord(1, 20);
```

setAction

6.0	D		X

Sets the JavaScript action of the document for a given trigger.

See also `addScript`, `setPageAction`, the `Bookmark` object `setAction` method, and the Field object `setAction` method.

Note: This method will overwrite any action already defined for the selected trigger.

Parameters

cTrigger	The name of the trigger point to which to attach the action. Values are: WillClose WillSave DidSave WillPrint DidPrint
cScript	The JavaScript expression to be executed when the trigger is activated.

Example

Insert WillSave and DidSave actions. The code gets the file size before saving and after saving, and compares the two.

```
// WillSave script
var myWillSave = 'var filesizeBeforeSave = this.filesize;\r'
   + 'console.println("File size before saving is " + '
   + ' filesizeBeforeSave );';

// DidSave script
var myDidSave =  'var filesizeAfterSave = this.filesize;\r'
   + 'console.println("File size after saving is "'
   + 'filesizeAfterSave);\r'
   + 'var difference = filesizeAfterSave - filesizeBeforeSave;\r'
   + 'console.println("The difference is " + difference );\r'
   + 'if ( difference < 0 )\r\t'
   + 'console.println("Reduced filesize!");\r'
   + 'else\r\t'
   + 'console.println("Increased filesize!");'

// Set document actions...
this.setAction("WillSave", myWillSave);
this.setAction("DidSave", myDidSave);
```

setDataObjectContents

7.0			D

Replaces the file attachment specified by the parameter cName with the contents of the oStream parameter.

Parameters

cName	The name associated with the Data object that is to be replaced with oStream.
oStream	A ReadStream object representing the contents of the file attachment.
cCryptFilter	(optional) The language-independent name of a crypt filter to use when encrypting this data object. This crypt filter must have previously been added to the document's list of crypt filters, using the addRecipientListCryptFilter method, otherwise, an exception will be thrown. The predefined Identity crypt filter can be used so that this data object is not encrypted in a file that is otherwise encrypted by the encryptForRecipients method.

Example 1

See the "Example" on page 300.

Example 2

This document has a file attachment named Acrobat.xml. The attachment is opened, the XML data is updated, then the new XML document is saved back to the attachment. It is possible to submit this XML file attachment. See "Example 5 (Acrobat 7.0)" on page 349, following the submitForm method. This example uses the XML data defined in the Example following XMLData.applyXPath.

```
// Get the file stream object of the attachment
var Acrobat = this.getDataObjectContents("Acrobat.xml");

// Convert to a string
var cAcrobat = util.stringFromStream(Acrobat, "utf-8");

// Parse this and get XFAObject
var myXML = XMLData.parse(cAcrobat,false);

// Change the value of grandad's income
myXML.family.grandad.personal.income.value = "300000";

// Save the XML document as a string, cAcrobat
var cAcrobat = myXML.saveXML('pretty');

// Convert to a file stream
var Acrobat = util.streamFromString(cAcrobat, "utf-8");

// Now "update" the attachment Acrobat.xml with this file stream
this.setDataObjectContents("Acrobat.xml", Acrobat);
```

Related objects, properties, and methods are dataObjects, getDataObject, openDataObject, createDataObject, importDataObject, getDataObjectContents, and removeDataObject, and the Data object.

setOCGOrder

7.0	D		X

Sets this document's OCGOrder array. This array represents how layers are displayed in the UI.

The simplest order array is a flat array of OCG objects. In this case, the listed OCGs are displayed in the UI as a flat list in the same order. If a subarray is present in the order array and the first element of the array is a string, the string will be listed with the rest of the array nested underneath it. If the first element of the array is not a string, the entire array will appear nested underneath the OCG preceding the subarray.

Related methods are `getOCGs` and `getOCGOrder`, and the `OCG` object.

Parameters

`oOrderArray`	The array to be used as this document's OCG Order array.

Example

Reverse the order of OCGs as listed in the UI.

```
var ocgOrder = this.getOCGOrder();
var newOrder = new Array();
for (var j=0; j < ocgOrder.length; j++)
   newOrder[j] = ocgOrder[ocgOrder.length-j-1];
this.setOCGOrder(newOrder);
```

setPageAction

6.0	D		X

Sets the action of a page in a document for a given trigger.

See also `setAction`, `addScript`, the `Bookmark` object `setAction` method, and the Field object `setAction` method.

Note: This method will overwrite any action already defined for the chosen page and trigger.

Parameters

`nPage`	The 0-based index of the page in the document to which an action is added.

`cTrigger`	The trigger for the action. Values are:
	`Open`
	`Close`

`cScript`	The JavaScript expression to be executed when the trigger is activated.

Example

This example causes the application to beep when the first page is opened.

```
this.setPageAction(0, "Open", "app.beep(0);");
```

setPageBoxes

5.0	D		X

Sets a rectangle that encompasses the named box for the specified pages.

See also `getPageBox`.

Parameters

`cBox`	(optional) The box type value, one of:
	`Art`
	`Bleed`
	`Crop`
	`Media`
	`Trim`
	Note that the BBox box type is read-only and only supported in `getPageBox`. For definitions of these boxes, see the *PDF Reference* version 1.7.

`nStart`	(optional) A 0-based index that defines the start of an inclusive range of pages in the document to be operated on. If `nStart` and `nEnd` are not specified, operates on all pages in the document. If only `nStart` is specified, the range of pages is the single page specified by `nStart`.
`nEnd`	(optional) A 0-based index that defines the end of an inclusive range of pages in the document to be operated on. If `nStart` and `nEnd` are not specified, operates on all pages in the document.
`rBox`	(optional) An array of four numbers in rotated user space to which to set the specified box. If not provided, the specified box is removed.

setPageLabels

5.0	D		X

Establishes the numbering scheme for the specified page and all pages following it until the next page with an attached label is encountered.

See also `getPageLabel`.

Parameters

`nPage`	(optional) The 0-based index for the page to be labeled.
`aLabel`	(optional) An array of three required items `[cStyle, cPrefix, nStart ]`: • `cStyle` is the style of page numbering. It can be: **`D`** — decimal numbering **`R`** or **`r`** — roman numbering, upper or lower case **`A`** or **`a`** — alphabetic numbering, upper or lower case See the *PDF Reference* version 1.7 for the exact definitions of these styles. • `cPrefix` is a string to prefix the numeric portion of the page label. • `nStart` is the ordinal with which to start numbering the pages. If not supplied, any page numbering is removed for the specified page and any others up to the next specified label. The value of `aLabel` cannot be `null`.

Example 1

For the ten pages in the document, label the first three with small roman numerals, the next five with numbers (starting at 1) and the last two with an "Appendix-" prefix and alphabetics.

```
this.setPageLabels(0, [ "r", "", 1]);
this.setPageLabels(3, [ "D", "", 1]);
this.setPageLabels(8, [ "A", "Appendix-", 1]);
var s = this.getPageLabel(0);
for (var i = 1; i < this.numPages; i++)
   s += ", " + this.getPageLabel(i);
console.println(s);
```

The example will produce the following output on the console:

```
i, ii, iii, 1, 2, 3, 4, 5, Appendix-A, Appendix-B
```

Example 2

Remove all page labels from a document.

```
for (var i = 0; i < this.numPages; i++) {
   if (i + 1 != this.getPageLabel(i)) {
      // Page label does not match ordinal page number.
      this.setPageLabels(i);
   }
}
```

setPageRotations

5.0	D		X

Rotates the specified pages in the current document.

See also `getPageRotation`.

Parameters

`nStart`	(optional) A 0-based index that defines the start of an inclusive range of pages in the document to be operated on. If `nStart` and `nEnd` are not specified, operates on all pages in the document. If only `nStart` is specified, the range of pages is the single page specified by `nStart`.
`nEnd`	(optional) A 0-based index that defines the end of an inclusive range of pages in the document to be operated on. If `nStart` and `nEnd` are not specified, operates on all pages in the document. If only `nEnd` is specified, the range of pages is 0 to `nEnd`.
`nRotate`	(optional) The amount of rotation that should be applied to the target pages. Can be 0, 90, 180, or 270. The default is 0.

Example

Rotate pages 0 through 10 of the current document.

```
this.setPageRotations(0, 10, 90);
```

setPageTabOrder

6.0	D		X

Sets the tab order of the form fields on a page. The tab order can be set by row, by column, or by structure.

If a PDF 1.4 document is viewed in Acrobat 6.0, tabbing between fields is in the same order as it is in Acrobat 5.0. Similarly, if a PDF 1.5 document is opened in Acrobat 5.0, the tabbing order for fields is the same as it is in Acrobat 6.0.

Parameters

`nPage`	The 0-based index of the page number on which the tabbing order is to be set.

`cOrder`	The order to be used. Values are:
	`rows`
	`columns`
	`structure`

Example

Set the page tab order for all pages to `rows`.

```
for (var i = 0; i < this.numPages; i++)
  this.setPageTabOrder(i, "rows");
```

setPageTransitions

5.0	D		X

Sets the page transition for a specific range of pages.

See also `getPageTransition`.

Parameters

`nStart`	(optional) A 0-based index that defines the start of an inclusive range of pages in the document to be operated on. If `nStart` and `nEnd` are not specified, operates on all pages in the document. If only `nStart` is specified, the range of pages is the single page specified by `nStart`.
`nEnd`	(optional) A 0-based index that defines the end of an inclusive range of pages in the document to be operated on. If `nStart` and `nEnd` are not specified, operates on all pages in the document. If only `nEnd` is specified, the range of pages is 0 to `nEnd`.
`aTrans`	(optional) The page transition array consists of three values: `[nDuration, cTransition, nTransDuration]`. • `nDuration` is the maximum amount of time the page is displayed before the viewer automatically turns to the next page. Set to -1 to turn off automatic page turning. • `cTransition` is the name of the transition to apply to the page. See `fullScreen.transitions` for a list of valid transitions. • `nTransDuration` is the duration (in seconds) of the transition effect. If `aTrans` is not present, any page transitions for the pages are removed.

Example

Put the document into full screen mode and apply some transitions:

```
this.setPageTransitions({ aTrans: [-1, "Random", 1] } );
app.fs.isFullScreen=true;
```

spawnPageFromTemplate

X	D		F

Note: This method has been superseded by `templates`, `createTemplate`, and the `Template` object `spawn` method.

Spawns a page in the document using the given template, as returned by `getNthTemplate`. The template feature does not work in Adobe Reader.

Parameters

`cTemplate`	The template name.
`nPage`	(optional) The 0-based page number before which or into which the template is spawned, depending on the value of `bOverlay`. If `nPage` is omitted, a new page is created at the end of the document.
`bRename`	(optional) Specifies whether fields should be renamed. The default is `true`.
`bOverlay`	(optional, Acrobat 4.0) If `false`, the template is inserted before the page specified by `nPage`. If `true` (the default) it is overlaid on top of that page.
`oXObject`	(optional, Acrobat 6.0) The value of this parameter is the return value of an earlier call to `spawnPageFromTemplate`.

Returns

Prior to Acrobat 6.0, this method returned nothing. Now, this method returns an object representing the page contents of the page spawned. This return object can then be used as the value of the optional parameter `oXObject` for subsequent calls to `spawnPageFromTemplate`.

Note: Repeatedly spawning the *same* page can cause a large increase in file size. To avoid this problem, `spawnPageFromTemplate` now returns an object that represents the page contents of the spawned page. This return value can be used as the value of the `oXObject` parameter in subsequent calls to the `spawnPageFromTemplate` method to spawn the same page.

Example 1

Spawn each template page in the current document.

```
var n = this.numTemplates;
var cTempl;
for (i = 0; i < n; i++) {
   cTempl = this.getNthTemplate(i);
   this.spawnPageFromTemplate(cTempl);
}
```

Example 2 (Acrobat 6.0)

The following example spawns the same template 31 times using the `oXObject` parameter and return value. Using this technique avoids overly inflating the file size.

```
var t = this.getNthTemplate(0)
var XO = this.spawnPageFromTemplate(t, this.numPages, false, false);
for (var i=0; i < 30; i++)
   this.spawnPageFromTemplate(t,this.numPages, false, false, XO);
```

submitForm

3.01			

Submits the form to a specified URL. To call this method, you must be running inside a web browser or have the Acrobat Web Capture plug-in installed. (If the URL uses the "mailto" scheme, it will be honored even if not running inside a web browser, as long as the SendMail plug-in is present.) Beginning with Adobe Reader 6.0, you need not be inside a web browser to call this method.

Note: (Acrobat 6.0) Depending on the parameters passed, there are restrictions on the use of this method. See the notes embedded in the description of the parameters.

The `https` protocol is supported for secure connections.

Parameters

`cURL`	The URL to submit to. This string must end in `#FDF` if the result from the submission is FDF or XFDF (that is, the value of `cSubmitAs` is "FDF" or "XFDF") and the document is being viewed inside a browser window.
`bFDF`	(optional) If `true` (the default) form data is submitted as FDF. If `false`, it is submitted as URL-encoded HTML. **Note:** This option has been deprecated; use `cSubmitAs` instead.
`bEmpty`	(optional) If `true`, submit all fields, including those that have no value. If `false` (the default), exclude fields that currently have no value. **Note:** If data is submitted as XDP, XML, or XFD (see the `cSubmitAs` parameter, below), this parameter is ignored. All fields are submitted, even fields that are empty. See `aFields`.
`aFields`	(optional) An array of field names to submit or a string containing a single field name: • If supplied, only the fields indicated are submitted, except those excluded by `bEmpty`. • If omitted or `null`, all fields are submitted, except those excluded by `bEmpty`. • If an empty array, no fields are submitted. A submitted FDF file might still contain data if `bAnnotations` is `true`. You can specify non-terminal field names to export an entire subtree of fields. **Note:** If data is submitted as XDP, XML, or XFD (see the `cSubmitAs` parameter), this parameter is ignored. All fields are submitted, even fields that are empty. See `bEmpty`.
`bGet`	(optional, Acrobat 4.0) If `true`, submit using the HTTP GET method. If `false` (the default), use a POST. GET is only allowed if using Acrobat Web Capture to submit (the browser interface only supports POST) and only if the data is sent as HTML (that is, `cSubmitAs` is `HTML`).
`bAnnotations`	(optional, Acrobat 5.0) If `true`, annotations are included in the submitted FDF or XML file. The default is `false`. Only applicable if `cSubmitAs` is `FDF` or `XFDF`.

`bXML`	(optional, Acrobat 5.0) If `true`, submit as XML. The default is `false`. **Note:** This option has been deprecated; use `cSubmitAs` instead.
`bIncrChanges`	(optional, Acrobat 5.0) If `true`, include the incremental changes to the PDF document in the submitted FDF file. The default is `false`. Only applicable if `cSubmitAs` is `FDF`. Not available in Adobe Reader.
`bPDF`	(optional, Acrobat 5.0) If `true`, submit the complete PDF document. The default is `false`. If `true`, all other parameters except `cURL` are ignored. Not available in Adobe Reader. **Note:** This option has been deprecated; use `cSubmitAs` instead.
`bCanonical`	(optional, Acrobat 5.0) If `true`, convert any dates being submitted to standard format (that is, `D:YYYYMMDDHHmmSSOHH'mm'`; see the *PDF Reference* version 1.7). The default is `false`.
`bExclNonUserAnnots`	(optional, Acrobat 5.0) If `true`, exclude any annotations that are not owned by the current user. The default is `false`.
`bExclFKey`	(optional, Acrobat 5.0) If `true`, exclude the F entry. The default is `false`.
`cPassword`	(optional, Acrobat 5.0) The password to use to generate the encryption key, if the FDF file needs to be encrypted before being submitted. Pass the value `true` (no quotes) to use the password that the user has previously entered (within this Acrobat session) for submitting or receiving an encrypted FDF file. If no password has been entered, the user is prompted to enter a password. Regardless of whether the password is passed in or requested from the user, this new password is remembered within this Acrobat session for future outgoing or incoming encrypted FDF files. Only applicable if `cSubmitAs` is `FDF`. **Caution:** As of Acrobat 8.0, you cannot create password-encrypted FDF files. If this parameter is used, a form trying to submit a password-encrypted FDF will throw an `ESErrorInvalidArgs` exception and the form submission will not occur.
`bEmbedForm`	(optional, Acrobat 6.0) If `true`, the call embeds the entire form from which the data is being submitted in the FDF file. Only applicable if `cSubmitAs` is `FDF`.

`oJavaScript`	(optional, Acrobat 6.0) Can be used to include `Before`, `After`, and `Doc` scripts in a submitted FDF file. If present, the value is converted directly to an analogous `CosObj` and used as the JavaScript attribute in the FDF file. For example:
	`oJavaScript:`
	`{`
	`  Before: 'app.alert("before!")',`
	`  After:  'app.alert("after")',`
	`  Doc: [ "MyDocScript1", "myFunc1()",`
	`  "MyDocScript2", "myFunc2()" ]`
	`}`
	Only applicable if `cSubmitAs` is `FDF`.

`cSubmitAs`	(optional, Acrobat 6.0) This parameter indicates the format for submission. Values are **`FDF`** — (default): Submit as FDF **`XFDF`** — Submit as XFDF **`HTML`** — Submit as HTML **`XDP`** — Submit as XDP **`XML`** — submit as XML. In Acrobat 7.0, form data is submitted in XML format unless the parameter `oXML` (new to Acrobat 7.0) contains a valid `XMLData` object, in which case that is what gets submitted instead. **`XFD`** — Submit as Adobe Form Client Data File **`PDF`** — Submit the complete PDF document; all other parameters except `cURL` are ignored. **Note:** (Save rights required) The choice of `PDF` is not available in Adobe Reader, unless the document has save rights. This parameter supersedes the individual format parameters. However, they are considered in the following priority order, from high to low: `cSubmitAs`, `bPDF`, `bXML`, `bFDF`.
`bInclNMKey`	(optional, Acrobat 6.0) If `true`, include the NM entry of any annotations. The default is `false`.
`aPackets`	(optional, Acrobat 6.0) An array of strings, specifying which packets to include in an XDP submission. This parameter is only applicable if `cSubmitAs` is `XDP`. Possible strings are: **`config`** **`datasets`** **`sourceSet`** **`stylesheet`** **`template`** **`pdf`** — The PDF should be embedded; if `pdf` is not included, only a link to the PDF is included in the XDP. **`xfdf`** — Include annotations in the XDP (since that packet uses XFDF format) **`*`** — All packets should be included in the XDP. The default for `pdf` is to include it as a *reference*. To embed the PDF file in the XDP, explicitly specify `pdf` as one of the packets. **Note:** (Save rights required) When submitting a document as `XDP` from Adobe Reader with `pdf` explicitly listed, the document must have document save rights. The default is: `["datasets", "xfdf"]`.
`cCharset`	(optional, Acrobat 6.0) The encoding for the values submitted. String values are `utf-8`, `utf-16`, `Shift-JIS`, `BigFive`, `GBK`, and `UHC`. If not passed, the current Acrobat behavior applies. For XML-based formats, `utf-8` is used. For other formats, Acrobat tries to find the best host encoding for the values being submitted. XFDF submission ignores this value and always uses `utf-8`.

`oXML`	(optional, Acrobat 7.0) This parameter is only applicable if `cSubmitAs` equals `XML`. It should be an `XMLData` object, which will get submitted.
`cPermID`	(optional, Acrobat 7.0) Specifies a permanent ID to assign to the PDF that is submitted if either the value of `cSubmitAs` is `PDF` or `bEmbedForm` is `true`. This permanent ID is the first entry in the `docID` array (`docID[0]`). Does not affect the current document.
`cInstID`	(optional, Acrobat 7.0) Specifies an instance ID to assign to the PDF that is submitted if either the value of `cSubmitAs` is `PDF` or `bEmbedForm` is `true`. This instance ID is the second entry in the `docID` array (`docID[1]`). Does not affect the current document.
`cUsageRights`	(optional, Acrobat 7.0) Specifies the additional usage rights to be applied to the PDF that is submitted if either the value of `cSubmitAs` is `PDF` or `bEmbedForm` is `true`. The only valid value is `submitFormUsageRights.RMA`. Does not affect the current document.

Example 1

Submit the form to the server.

```
this.submitForm("http://www.example.com/cgi-bin/myscript.cgi#FDF");
```

Example 2

Submit selected form fields to a server-side script as FDF.

```
var aSubmitFields = new Array( "name", "id", "score" );
this.submitForm({
   cURL: "http://www.example.com/cgi-bin/myscript.cgi#FDF",
   aFields: aSubmitFields,
   cSubmitAs: "FDF" // the default, not needed here
});
```

Example 3

This example shows a shortcut to submitting a whole subtree. Passing “name” as part of the `field` parameter, submits "`name.title`", "`name.first`", "`name.middle`" and "`name.last`".

```
this.submitForm("http://www.example.com/cgi-bin/myscript.cgi#FDF",
   true, false, "name");
```

Example 4

Submit form as XFDF to a server-side script.

```
this.submitForm({
   cURL: "http://www.example.com/cgi-bin/myscript.cgi#FDF",
   cSubmitAs: "XFDF"
});
```

Example 5 (Acrobat 7.0)

For a PDF file that contains several XFA forms as attachments, the following script gathers the XML data from each attachment and concatenates them. The combined data is then submitted.

```
var oParent = event.target;
var oDataObjects = oParent.dataObjects;
if (oDataObjects == null)
   app.alert("This form has no attachments!");
else {
   var nChildren = oDataObjects.length;
   var oFirstChild = oParent.openDataObject(oDataObjects[0].name);
   var oSubmitData = oFirstChild.xfa.data.nodes.item(0).clone(true);
   for (var iChild = 1; iChild < nChildren; iChild++) {
      var oNextChild = oParent.openDataObject(
         oDataObjects[iChild].name);
      oSubmitData.nodes.append(oNextChild.xfa.data.nodes.item(0));
      oNextChild.closeDoc();
   }
   oParent.submitForm({
   cURL: "http://www.example.com/cgi-bin/myCGI.pl#FDF",
   cSubmitAs: "XML",
   oXML: oSubmitData
   });
   oFirstChild.closeDoc();
}
```

This example uses `dataObjects`, `openDataObject` and properties and methods of the `XFA` object.

Example 6 (Acrobat 7.0)

Submits current document as a PDF. This script uses cPermID, cInstID and cUsageRights.

```
this.submitForm({
   cUrl: myURL,
   cSubmitAs: "PDF",
   cPermID: someDoc.docID[0],
   cInstID: someDoc.docID[1],
   cUsageRights: submitFormUsageRights.RMA });
```

syncAnnotScan

5.0			

Guarantees that all annotations will be scanned by the time this method returns.

To show or process annotations for the entire document, all annotations must have been detected. Normally, a background task runs that examines every page and looks for annotations during idle time, as this scan is a time-consuming task. Much of the annotation behavior works gracefully even when the full list of annotations is not yet acquired by background scanning.

In general, you should call this method if you want the entire list of annotations.

See also `getAnnots`.

Example

Wait for all annotations to be scanned, then get the array of annotations in the document and sort by author.

The second line of code is not executed until `syncAnnotScan` returns, which does not occur until the annotation scan of the document is completed.

```
this.syncAnnotScan();
annots = this.getAnnots({nSortBy:ANSB_Author});
// Now, do something with the annotations.
```

Doc.media

The `media` property of each document specifies an object that contains multimedia properties and methods that apply to the document.

Doc.media properties

canPlay

6.0			

Indicates whether multimedia playback is allowed for a document. Playback depends on the user's Trust Manager preferences and other factors. For example, playback is not allowed in authoring mode.

`doc.media.canPlay` returns an object that contains both a yes/no indication and a reason why playback is not allowed, if that is the case.

Type

Object

Access

R

If playback is allowed, `canPlay.yes` exists to indicate this. (It is an empty object, but it may contain other information in the future.) You can make a simple test like this:

```
if( doc.media.canPlay.yes )
{
   // We can play back multimedia for this document
}
```

If playback is not allowed, the `canPlay.no` object exists instead. As with `canPlay.yes`, you can simply test for the existence of `canPlay.no` or you can look inside it for information about why playback is not allowed. At least one of these properties or other properties that may be added in the future will exist within `canPlay.no`:

Property	Description
`authoring`	Cannot play when in authoring mode.
`closing`	Cannot play because the document is closing.
`saving`	Cannot play because the document is saving.
`security`	Cannot play because of security settings.
`other`	Cannot play for some other reason.

In addition, `canPlay.canShowUI` indicates whether any alert boxes or other user interface are allowed in response to this particular playback rejection.

Example

Get `canPlay` object and analyze the case we can't play the media in the document.

```
var canPlay = doc.media.canPlay;
if( canPlay.no )
{
   // We can't play, why not?
   if( canPlay.no.security )
   {
      // The user's security settings prohibit playback,
      // are we allowed to put up alerts right now?
      if( canPlay.canShowUI )
         app.alert( "Security prohibits playback" );
      else
         console.println( "Security prohibits playback" );
   }
   else
   {
      // Can't play for some other reason, handle it here
   }
}
```

Doc.media methods

deleteRendition

6.0			

Deletes the named Rendition from the document. The Rendition is no longer accessible with JavaScript. It does nothing if the Rendition is not present.

Parameters

`cName`	A string that is the name of the Rendition.

Example

Delete a particular rendition, and report back if we are successful.

```
this.media.deleteRendition("myMedia");
if ( this.media.getRendition("myMedia") == null)
   console.println( "Rendition successfully deleted" );
```

getAnnot

6.0			

Looks for and returns a `ScreenAnnot` object in the document by page number and either name or title, or returns `null` if there is no matching screen annotation. If both name and title are specified, both must match.

Parameters

`args`	An object containing the properties to be passed to this method. The properties are described below.

This table describes the properties of `args`.

`nPage`	The page number (base 0) on which the annotation resides.
`cAnnotName`	(optional) The name of the screen annotation. **Note:** `cAnnotName` is never used in PDF files generated by Acrobat.
`cAnnotTitle`	(optional) The title of the screen annotation.

Note: The parameters for this method must be passed as an object literal and not as an ordered listing of parameters.

Returns

`ScreenAnnot` object

Example

The Acrobat user interface allows you to specify the title for a screen annotation but not its name, so a typical use of `getAnnot` would be:

```
var annot= myDoc.media.getAnnot
   ({ nPage: 0,cAnnotTitle: "My Annot Title" });
```

See the example following `getRendition` for an additional example.

getAnnots

6.0			

The `doc.media.getAnnots` method returns an array of all the `ScreenAnnot` objects on the specified page of the document, or all the `ScreenAnnot` objects on all pages of the document if `nPage` is omitted. The array is empty if there are no such ScreenAnnots.

Parameters

`nPage`	The page number (base 0) on which the ScreenAnnots reside.

Returns

Array of `ScreenAnnot` objects

Example

Get a listing of the ScreenAnnots on page 0, then play a media clip in a screen annotation randomly chosen from the list.

```
var annots = this.media.getAnnots({ nPage: 0 });
var rendition = this.media.getRendition("myClip");
var settings = { windowType: app.media.windowType.docked }
var l = annots.length
var i = Math.floor( Math.random() * l ) % l
var args = { rendition:rendition, annot:annots[i], settings:settings };
app.media.openPlayer( args );
```

getOpenPlayers

7.0			

Returns an array of `MediaPlayer` objects, one for each currently open media player. The players in the array are listed in the order in which they were opened. Using this array, some or all of the open players can be manipulated. For example, you can stop or close all players that the document has opened, without having to keep a list of them yourself.

Each time `getOpenPlayers` is called, it returns a new copy of the array, listing the players open at that time. New players that are subsequently opened do not show up in an array already returned. If a player in the array is closed, the player object remains in the array and `player.isOpen` becomes `false`. The `doc.media.getOpenPlayers` method can be called again to get a new, up-to-date player array.

Do not write code that iterates directly over `doc.media.getOpenPlayers`:

```
for( var i in doc.media.getOpenPlayers() ) // Wrong!
```

Instead, get a copy of the player array and iterate over that:

```
var players = doc.media.getOpenPlayers();
for( var i in players ) {
....
}
```

This insures that the loop works correctly even if players are opened or closed during the loop.

Returns

Array of `MediaPlayer` objects.

Example

The following two functions take a Doc as a parameter and operate on the running players associated with that Doc.

```
// Stop all running players.
function stopAllPlayers( doc ) {
   var players = doc.media.getOpenPlayers();
   for( var i in players ) players[i].stop();
}
// Close all running players. Closing a player does not remove it from
```

```
// the array.
function closeAllPlayers( doc ) {
   var players = doc.media.getOpenPlayers();
   for( var i in players )
      players[i].close( app.media.closeReason.general );
}
```

getRendition

6.0			

Looks up a Rendition in the document by name and returns it, or returns `null` if there is no Rendition with that name.

Parameters

`cName`	`cName`, a string, is the name of the Rendition.

Returns

`Rendition` object

Example

The following script is executed from a mouse-up action of a form button. It plays a docked media clip in a screen annotation.

```
app.media.openPlayer({
   rendition: this.media.getRendition( "myClip" ),
   annot: this.media.getAnnot( {nPage:0,cAnnotTitle:"myScreen"} ),
   settings: { windowType: app.media.windowType.docked }
});
```

newPlayer

6.0			

This method creates and returns a `MediaPlayer` object. The `args` parameter must contain a `settings` property and optionally can contain an `events` property. It can also contain additional user-defined properties. The properties of `args` are copied into the new `MediaPlayer` object. This is a shallow copy, which means that if any of the copied properties are objects themselves, those objects are shared between `args` and the new player.

The `newPlayer` method creates a bare-bones player that does not have any of the standard EventListeners required for standard Acrobat media player behavior. Use `app.media.addStockEvents` to add the necessary EventListeners.

In most cases, it is better to use `app.media.createPlayer` instead of `doc.media.newPlayer` to create a media player. The `createPlayer` method sets up the standard EventListeners and other player properties automatically.

Parameters

`args`	A `PlayerArgs` object.

Returns

`MediaPlayer` object.

Example

See `Events.dispatch` for an example.

Embedded PDF

This object describes an API exposed to the object model of a container application that allows sending and receiving messages from an embedded PDF document. For example, when a PDF document is embedded in an HTML document using the <OBJECT> tag, the PDF object is scripted in the browser scripting context.

The `HostContainer` object provides the corresponding interface in the PDF scripting model. Both the container and PDF document must explicitly allow this communication to occur for security reasons.

Embedded PDF properties

messageHandler

7.0.5			

This property allows a script running in the web browser scripting context to register a notification object that will be called if a script in the PDF document calls the Doc `hostContainer.postMessage` method.

The value of this property is an object that may expose the following methods.

Method	Description
`onMessage`	If present, this method will be called in response to the Doc `hostContainer.postMessage` method. The message is delivered asynchronously. The method is passed a single array parameter containing the array passed to the `postMessage` method.
`onError`	If present, this method will be called in response to an error. It is passed an Error object and an array of strings corresponding to the message that caused the error. If an error occurs and this property is undefined, the error will not be delivered (unlike messages, errors are not queued). The `name` property of the `Error` object will be set to one of the following strings: • "MessageGeneralError": A general error occurred. • "MessageNotAllowedError": The operation failed for security reasons. • "MessageDocNotDisclosedError": The document has not been configured for disclosure to the host container. The `hostContainer.messageHandler.onDisclose` property of the Doc must be initialized correctly. • "MessageDocRefusedDisclosureError": The document has refused to disclose itself to the host container based on the URL because the `hostContainer.messageHandler.onDisclose` method returned `false`.

When the methods are invoked, the `this` object will be the `messageHandler` instance that the method is being called on. Properties on the `messageHandler` property that begin with `on` are reserved for future use as notification methods.

If the PDF document has had the `postMessage` method called on it prior to this method being registered, all of the queued messages will subsequently be passed to the `messageHandler` object once it is set.

Messages are guaranteed to be delivered in the order in which they are posted and errors are guaranteed to be delivered in the order in which they occurred. However, there is no correspondence between the delivery order of messages and errors.

Exceptions thrown from within the handler methods will be discarded. Messages and errors will not be delivered while inside an `onMessage` / onError `handler`.

Note: This property is not implemented on the Mac OS platform.

Type

Object

Access

R/W

Embedded PDF methods

postMessage

7.0.5			

Sends a message asynchronously to the PDF document message handler if the PDF document has disclosed itself by returning `true` from the `onDisclosed` method of the `HostContainer` object `messageHandler` property.

The message is passed to the `onMessage` method of the `messageHandler`.

If the PDF document does not disclose itself to the host container, an error will be passed to the `onError` method of the `messageHandler` property at some later point after `postMessage` has returned. If the PDF document has not registered to receive events by setting the Doc `hostContainer.messageHandler` property, the events will be queued until the PDF document sets the property.

The messages will be submitted to a queue of messages until they are delivered. If the queue size exceeds a maximum, an error will be thrown until some of the messages in the queue have been delivered.

Parameters

`aMessage`	An array of one or more strings that will be passed to `onMessage`.

Note: This method is not implemented on the Mac OS platform.

Error

Error objects are dynamically created whenever an exception is thrown from methods or properties implemented in JavaScript. Several subclasses of the Error object can be thrown by core JavaScript (`EvalError`, `RangeError`, `SyntaxError`, `TypeError`, `ReferenceError`, `URLError`). They all have the Error object as prototype. JavaScript can throw some of these exceptions, or implement subclasses of the Error object at its convenience. If your scripts are using the mechanism of `try/catch` error handling, the object thrown should be one of the types listed in the following table.

Error object	Brief description
`RangeError`	Argument value is out of valid range.
`TypeError`	Wrong type of argument value.
`ReferenceError`	Reading a variable that does not exist.
`MissingArgError`	Missing required argument.
`NumberOfArgsError`	Invalid number of arguments to a method.
`InvalidSetError`	A property set is not valid or possible.
`InvalidGetError`	A property get is not valid or possible.
`OutOfMemoryError`	Out of memory condition occurred.
`NotSupportedError`	Functionality not supported in this configuration (for example, Adobe Reader).
`NotSupportedHFTError`	HFT is not available (a plug-in may be missing).
`NotAllowedError`	Method or property is not allowed for security reasons.
`GeneralError`	Unspecified error cause.
`RaiseError`	Acrobat internal error.
`DeadObjectError`	Object is dead.
`HelpError`	User requested for help with a method.

Error object types implemented by JavaScript inherit properties and methods from the core Error object. Some JavaScript objects may implement their own specific types of exception. A description of the Error subclass (with added methods and properties, if any) should be provided in the documentation for the particular object.

Example

Print all properties of the Error object to the console.

```
try {
   app.alert(); // one argument is required for alert
} catch(e) {
   for (var i in e)
   console.println( i + ": " + e[i])
}
```

Error properties

fileName

6.0			

The name of the script that caused the exception to be thrown.

Type

String

Access

R

lineNumber

6.0			

The offending line number from where an exception was thrown in the JavaScript code.

Type

Integer

Access

R

extMessage

7.0			

A message providing additional details about the exception.

Type

String

Access

R

message

6.0			

The error message providing details about the exception.

Type

String

Access

R

name

6.0			

The name of the `Error` object subclass, indicating the type of the `Error` object instance.

Type

String

Access

R/W

Error methods

toString

6.0			

Gets the error message that provides details about the exception.

Returns

The error message string. (See the `message` property.)

event

All JavaScript scripts are executed as the result of a particular event. For each of these events, JavaScript creates an `event` object. During the occurrence of each event, you can access this object to get and possibly manipulate information about the current state of the event.

Each event has a `type` and a `name` property that uniquely identify the event. This section describes all the events, listed as type/name pairs, and indicates which additional properties, if any, they define.

The `rc` property of an event is its return code. The description for each event describes whether it listens to (is affected by) the return code.

It is important for JavaScript writers to know when these events occur and in what order they are processed. Some methods or properties can only be accessed during certain events.

Event type/name combinations

App/Init

This event (the *application initialization event*) occurs when the viewer is started. Script files, called *folder-level JavaScripts*, are read in from the application and user JavaScript folders. They load in the following order: config.js, glob.js, all other files, then any user files.

This event does not listen to the `rc` return code.

Batch/Exec

5.0			

This event occurs during the processing of each document of a batch sequence. Scripts authored as part of a batch sequence can access the `event` object upon execution.

The `target` for this event is the Doc.

This event listens to the `rc` return code. If `rc` is set to `false`, the batch sequence is stopped.

Bookmark/Mouse Up

5.0			

This event occurs whenever a user clicks a bookmark that executes a JavaScript.

The `target` for this event is the bookmark object that was clicked.

This event does not listen to the `rc` return code.

Console/Exec

5.0			

This event occurs whenever a user evaluates a JavaScript in the console.

This event does not listen to the `rc` return code.

Doc/DidPrint

5.0			

This event is triggered after a document has printed.

The `target` for this event is the Doc.

This event does not listen to the `rc` return code.

Doc/DidSave

5.0			

This event is triggered after a document has been saved.

The `target` for this event is the Doc.

This event does not listen to the `rc` return code.

Doc/Open

4.0			

This event is triggered whenever a document is opened. When a document is opened, the document-level script functions are scanned and any exposed scripts are executed.

The `target` for this event is the Doc. This event also defines the `targetName` property.

This event does not listen to the `rc` return code.

Doc/WillClose

5.0			

This event is triggered before a document is closed.

The `target` for this event is the Doc.

This event does not listen to the `rc` return code.

Doc/WillPrint

5.0			

This event is triggered before a document is printed.

The `target` for this event is the Doc.

This event does not listen to the `rc` return code.

Doc/WillSave

5.0			

This event is triggered before a document is saved.

The `target` for this event is the Doc.

This event does not listen to the `rc` return code.

External/Exec

5.0			

This event is the result of an external access, for example, through OLE, AppleScript, or loading an FDF.

This event does not listen to the `rc` return code.

Field/Blur

4.05			

This event occurs after all other events just as a field loses focus. This event is generated regardless of whether a mouse click is used to deactivate the field (for example, a tab key could be used instead).

Additional properties defined:

- `target`: The field whose validation script is being executed.
- `modifier`, `shift`, `targetName`, and `value` .

This event does not listen to the `rc` return code.

Field/Calculate

3.01			

This event is defined when a change in a form requires that all fields that have a calculation script attached to them be executed. All fields that depend on the value of the changed field will now be recalculated.

These fields may in turn generate additional `Field/Validate`, `Field/Blur`, and `Field/Focus` events.

Calculated fields may have dependencies on other calculated fields whose values must be determined beforehand. The *calculation order array* contains an ordered list of all the fields in a document that have a calculation script attached. When a full calculation is needed, each of the fields in the array is calculated in turn starting with the zeroth index of the array and continuing in sequence to the end of the array.

To change the calculation order of fields, use the Forms > Edit Fields > Set Field Calculation Order menu item while in Edit Form mode.

The `target` for this event is the field whose calculation script is being executed. This event also defines the `source` and `targetName` properties.

This event listens to the `rc` return code. If the return code is set to `false`, the field's value is not changed. If true, the field takes on the value found in the `value` property.

Field/Focus

4.05			

This event occurs after the mouse-down event but before the mouse-up event after the field gains the focus. It occurs regardless of whether a mouse click is used to activate the field (or, for example, the tab key) and is the best place to perform processing that must be done before the user can interact with the field.

The `target` for this event is the field whose validation script is being executed. This event also defines the `modifier`, `shift`, and `targetName` properties.

This event does not listen to the `rc` return code.

Field/Format

3.01			

This event is triggered once all dependent calculations have been performed. It allows the attached JavaScript to change the way that the data value appears to a user (also known as its presentation or appearance). For example, if a data value is a number and the context in which it should be displayed is currency, the formatting script can add a dollar sign ($) to the front of the value and limit it to two decimal places past the decimal point.

The `target` for this event is the field whose format script is being executed. This event also defines the `commitKey`, `targetName`, and `willCommit` properties.

This event does not listen to the `rc` return code. However, the resulting `value` is used as the field's formatted appearance.

Field/Keystroke

3.01			

This event occurs whenever a user types a keystroke into a text box or combo box (including cut and paste operations) or selects an item in a combo box list or list box field. A keystroke script may limit the type of keys allowed. For example, a numeric field might only allow numeric characters.

The Acrobat user interface allows the author to specify a `Selection Change` script for list boxes. The script is triggered every time an item is selected. This is implemented as the keystroke event where the keystroke value is equivalent to the user selection. This behavior is also implemented for the combo box—the "keystroke" could be thought to be a paste into the text field of the value selected from the drop-down list.

There is a final call to the keystroke script before the validate event is triggered. This call sets the `willCommit` to `true` for the event. With keystroke processing, it is sometimes useful to make a final check on the field value (pre-commit) before it is committed. This allows the script writer to gracefully handle particularly complex formats that can only be partially checked on a keystroke-by-keystroke basis.

The `keystroke` event of text fields is called in situations other than when the user is entering text with the keyboard or committing the field value. It is also called to validate the default value of a field when set through the UI or by JavaScript and to validate entries provided by autofill. In these situations not all properties of the event are defined. Specifically `event.target` will be `undefined` when validating default values and `event.richChange` and `event.richValue` will be `undefined` when validating autofill entries.

The `target` for this event is the field whose keystroke script is being executed. This event also defines the `commitKey`, `change`, `changeEx`, `keyDown`, `modifier`, `selEnd`, `selStart`, `shift`, `targetName`, `value`, and `willCommit` properties.

This event listens to the `rc` return code. If set to `false`, the keystroke is ignored. The resulting `change` is used as the keystroke if the script wants to replace the keystroke code. The resultant `selEnd` and `selStart` properties can change the current text selection in the field.

Field/Mouse Down

3.01			

This event is triggered when a user starts to click a form field and the mouse button is still down. A mouse-down event does not occur unless a `mouse enter` event has already occurred. It is advised that you perform very little processing during this event (for example, play a short sound).

The `target` for this event is the field whose validation script is being executed. This event also defines the `modifier`, `shift`, and `targetName` properties.

This event does not listen to the `rc` return code.

Field/Mouse Enter

3.01			

This event is triggered when a user moves the pointer inside the rectangle of a field. This is the typical place to open a text field to display help text, for example.

The `target` for this event is the field whose validation script is being executed. This event also defines the `modifier`, `shift`, and `targetName` properties.

This event does not listen to the `rc` return code.

Field/Mouse Exit

3.01			

This event occurs when a user moves the mouse pointer outside of the rectangle of a field. A `mouse exit` event will not occur unless a `mouse enter` event has already occurred.

The `target` for this event is the field whose validation script is being executed. This event also defines the `modifier`, `shift`, and `targetName` properties.

This event does not listen to the `rc` return code.

Field/Mouse Up

3.01			

This event is triggered when the user clicks a form field and releases the mouse button. This is the typical place to attach routines such as the submit action of a form. A mouse-up event will not occur unless a mouse-down event has already occurred.

The `target` for this event is the field whose validation script is being executed. This event also defines the `modifier`, `shift`, and `targetName` properties.

This event does not listen to the `rc` return code.

Field/Validate

3.01			

Regardless of the field type, user interaction with a field may produce a new value for that field. After the user has either clicked outside a field, tabbed to another field, or pressed the enter key, the user is said to have *committed* the new data value.

This event is the first event generated for a field after the value has been committed so that a JavaScript can verify that the value entered was correct. If the validate event is successful, the next event triggered is the `calculate` event.

The `target` for this event is the field whose validation script is being executed. This event also defines the `change`, `changeEx`, `keyDown`, `modifier`, `shift`, `targetName`, and `value` properties.

This event does not listen to the `rc` return code. If the return code is set to `false`, the field value is considered to be invalid and the value of the field is unchanged.

Link/Mouse Up

5.0			

This event is triggered when a link containing a JavaScript action is activated by the user.

The `target` for this event is the Doc.

This event does not listen to the `rc` return code.

Menu/Exec

5.0			

This event occurs whenever JavaScript that has been attached to a menu item is executed. The user can add a menu item and associate JavaScript actions with it. For example,

```
app.addMenuItem({ cName: "Hello", cParent: "File",
   cExec: "app.alert('Hello',3);", nPos: 0});
```

The script `app.alert('Hello',3)` will execute during a menu event. There are two ways for this to occur:

- The user can select the menu item in the user interface.
- Programmatically, when `app.execMenuItem("Hello")` is executed (perhaps, during a mouse-up event of a button field).

The `target` for this event is the currently active document, if one is open. This event also defines the `targetName` property.

This event listens to the `rc` return code in the case of the enable and marked proc for menu items. (See the `cEnabled` and `cMarked` parameters of `app.addMenuItem`.) A return code of `false` will disable or unmark a menu item. A return code of `true` will enable or mark a menu item.

Page/Open

4.05			

This event occurs whenever a new page is viewed by the user and after page drawing for the page has occurred.

The `target` for this event is the Doc.

This event does not listen to the `rc` return code.

Page/Close

4.05			

This event occurs whenever the page being viewed is no longer the current page; that is, the user switched to a new page or closed the document.

The `target` for this event is the Doc.

This event does not listen to the `rc` return code.

Screen/Blur

6.0			

This event occurs after all other events, just as the screen annotation loses focus. This event is generated regardless of whether a mouse click is used to deactivate the screen annotation (for example, the tab key might be used).

The `target` for this event is the `ScreenAnnot` object that initiated this event. `targetName` is the title of the screen annotation. This event also defines the `modifier` and `shift` properties.

This event does not listen to the `rc` return code.

Screen/Close

6.0			

This event occurs whenever the page being viewed is no longer the current page; that is, the user switched to a new page or closed the document.

The `target` for this event is the `ScreenAnnot` object that initiated this event. `targetName` is the title of the screen annotation. This event also defines the `modifier`, `shift`, and `target` properties.

This event does not listen to the `rc` return code.

Screen/Focus

6.0			

This event occurs after the mouse-down event but before the mouse-up after the field gains the focus. This routine is called regardless of whether a mouse click is used to activate the screen annotation (for example, the tab key might be used). It is the best place to perform processing that must be done before the user can interact with the field.

The `target` for this event is the `ScreenAnnot` object that initiated this event. `targetName` is the title of the screen annotation. This event also defines the `modifier` and `shift` properties.

This event does not listen to the `rc` return code.

Screen/InView

6.0			

This event occurs whenever a new page first comes into view by the user. When the page layout is set to Continuous or Continuous - Facing, this event occurs before the Screen/Open event.

The `target` for this event is the `ScreenAnnot` object that initiated this event. `targetName` is the title of the screen annotation. This event also defines the `modifier` and `shift` properties.

This event does not listen to the `rc` return code.

Screen/Mouse Down

6.0			

This event is triggered when a user starts to click a screen annotation and the mouse button is still down. It is advised that you perform very little processing (that is, play a short sound) during this event. A mouse-down event will not occur unless a `mouse enter` event has already occurred.

The `target` for this event is the `ScreenAnnot` object that initiated this event. `targetName` is the title of the screen annotation. This event also defines the `modifier` and `shift` properties.

This event does not listen to the `rc` return code.

Screen/Mouse Enter

6.0			

This event is triggered when a user moves the mouse pointer inside the rectangle of an screen annotation.

The `target` for this event is the `ScreenAnnot` object that initiated this event. `targetName` is the title of the screen annotation. This event also defines the `modifier` and `shift` properties.

This event does not listen to the `rc` return code.

Screen/Mouse Exit

6.0			

This event is the opposite of the `Mouse Enter` event and occurs when a user moves the mouse pointer outside of the rectangle of a screen annotation. A `Mouse Exit` event will not occur unless a `Mouse Enter` event has already occurred.

The `target` for this event is the `ScreenAnnot` object that initiated this event. `targetName` is the title of the screen annotation. This event also defines the `modifier` and `shift` properties.

This event does not listen to the `rc` return code.

Screen/Mouse Up

6.0			

This event is triggered when the user clicks a screen annotation and releases the mouse button. This is the typical place to attach routines such as starting a multimedia clip. A mouse-up event will not occur unless a mouse-down event has already occurred.

The `target` for this event is the `ScreenAnnot` object that initiated this event. `targetName` is the title of the screen annotation. This event also defines the `modifier` and `shift` properties.

This event does not listen to the `rc` return code.

Screen/Open

6.0			

This event occurs whenever a new page is viewed by the user and after page drawing for the page has occurred.

The `target` for this event is the `ScreenAnnot` object that initiated this event. `targetName` is the title of the screen annotation. This event also defines the `modifier` and `shift` properties.

This event does not listen to the `rc` return code.

Screen/OutView

6.0			

This event occurs whenever a page first goes out of view from the user. When the page layout is set to Continuous or Continuous - Facing, this event occurs after the `Screen/Close` event.

The `target` for this event is the `ScreenAnnot` object that initiated this event. `targetName` is the title of the screen annotation. This event also defines the `modifier` and `shift` properties.

This event does not listen to the `rc` return code.

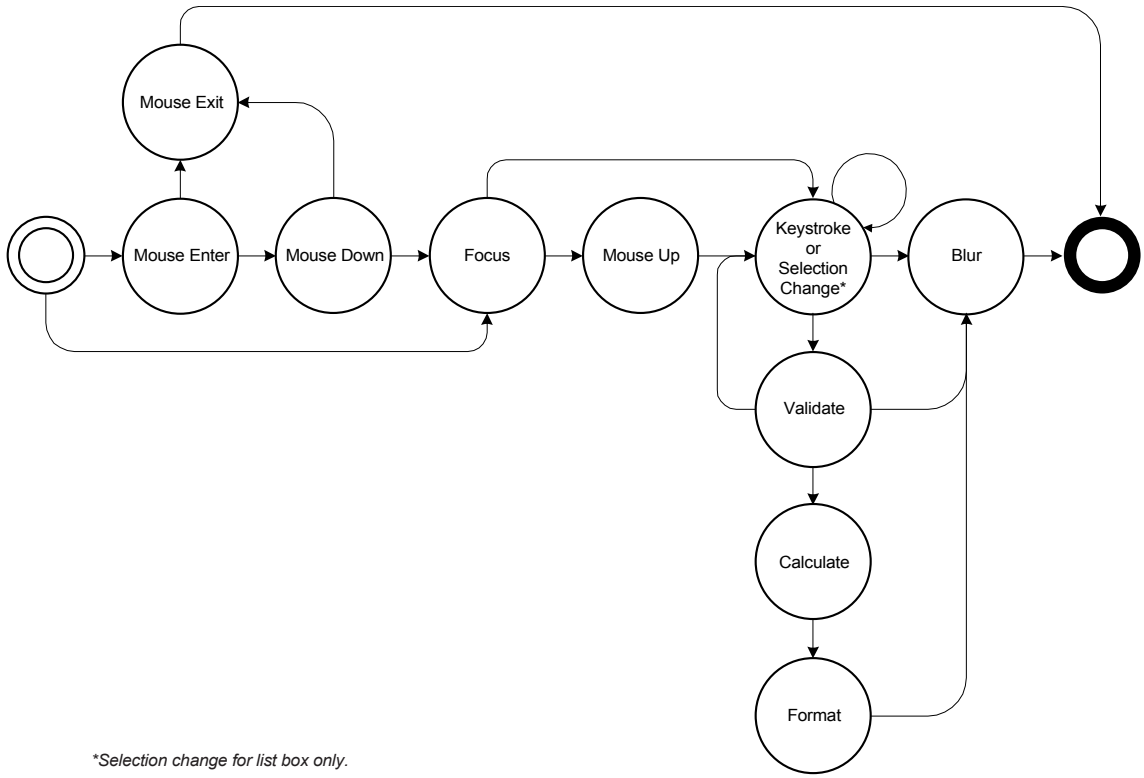
Document Event Processing

When a document is opened, the `Doc/Open` event occurs. Functions are scanned and any exposed (top-level) scripts are executed. Next, if the NeedAppearances entry in the PDF file is set to `true` in the AcroForm dictionary, the formatting scripts of all form fields in the document are executed. (See the *PDF Reference* version 1.7.) Finally, the `Page/Close` event occurs.

Note: For users who create PDF files containing form fields with the NeedAppearances entry set to true, be sure to do a Save As before posting such files on the web. Performing a Save As on a file generates the form appearances, which are saved with the file. This increases the performance of Adobe Reader when it loads the file within a web browser.

Form event processing

The order in which the form events occur is shown in the state diagram below. Certain dependencies are worth noting. For example, the mouse-up event cannot occur if the Focus event did not occur.



Multimedia event processing

Whenever an event is triggered and dispatched to an EventListener, a multimedia `event` object is passed as a parameter to the EventListener. This object is similar to the event object used elsewhere in Acrobat and it has the properties listed below.

Multimedia `event` objects triggered by rendition actions (for example, in custom JavaScript entered from the Actions tab in the Multimedia Properties panel) also include these properties:

`action.annot`	The `ScreenAnnot` object for this event.
`action.rendition`	The `Rendition` object for this event.

Multimedia event objects that have been dispatched by the standard multimedia event dispatcher also include these properties. These are not present if you provide your own `events.dispatch` method.

`media.doc`	The document, same as `target.doc`.
`media.events`	The events object, same as `target.events`.
`media.id`	A copy of `event.name` with spaces removed.

Individual events may have additional properties. See the description of each `EventListener` object method for details.

An event method called by the standard event dispatcher may set either of these properties to stop further event dispatching:

```
stopDispatch
stopAllDispatch
```

To stop the current event from being dispatched to any remaining EventListeners, an event method can set `event.stopDispatch` to `true`. If this is done in an `on` event method, no more `on` methods will be called for the event, but `after` methods will still be called. If you set `event.stopAllDispatch`, no more event methods of either type will be called. See the `EventListener` object for a description of the `on` and `after` EventListeners.

event properties

change

3.01			

A string specifying the change in value that the user has just typed. A JavaScript may replace part or all of this string with different characters. The change may take the form of an individual keystroke or a string of characters (for example, if a paste into the field is performed).

Type

String

Access

R/W

Example

Change all keystrokes to upper case.

```
// Custom Keystroke for text field
event.change = event.change.toUpperCase();
```

changeEx

5.0			

Contains the export value of the change and is available only during a `Field/Keystroke` event for list boxes and combo boxes.

For the list box, the keystroke script, if any, is entered under the Selection Change tab in the properties dialog box.

For the combo box, `changeEx` is only available if the pop-up list is used—that is, a selection (with the mouse or the keyboard) is being made from the list. If the combo is editable and the user types in an entry, the `Field/Keystroke` event behaves as for a text field (that is, there are no `changeEx` or `keyDown` event properties).

Beginning with Acrobat 6.0, `event.changeEx` is defined for text fields. When `event.fieldFull` is `true`, `changeEx` is set to the entire text string the user attempted to enter and `event.change` is the text string cropped to what fits within the field. Use `event.richChangeEx` (and `event.richChange`) to handle rich text fields.

Type

Various

Access

R

Example 1

This example implements a simple HTML online help file system.

Here is a combo box, which is described programmatically.

```
var c = this.addField({
   cName: "myHelp",
   cFieldType: "combobox",
   nPageNum: 0,
   oCoords: [72,12+3*72, 3*72, 0+3*72]
})
```

Now set the items in the combo box.

```
c.setItems([
   ["Online Help", "http://www.example.com/myhelp.html"],
   ["How to Print", "http://www.example.com/myhelp.html#print"],
   ["How to eMail", "http://www.example.com/myhelp.html#email"]
]);
```

Set the action.

```
c.setAction("Keystroke", "getHelp()");
```

This function is defined at the document level.

```
function getHelp() {
   if ( !event.willCommit && (event.changeEx != "") )
      app.launchURL(event.changeEx);
}
```

Example 2

For an example of the use of `changeEx` with text fields, see the example following `fieldFull`.

commitKey

4.0			

Determines how a form field will lose focus. Values are:

`0` — Value was not committed (for example, escape key was pressed).

`1` — Value was committed because of a click outside the field using the mouse.

`2` — Value was committed because of pressing the Enter key.

`3` — Value was committed by tabbing to a new field.

Type

Number

Access

R

Example

To automatically display an alert dialog box after a field has been committed, add the following to the field's format script:

```
if (event.commitKey != 0)
   app.alert("Thank you for your new field value.");
```

fieldFull

6.0			

Set to `true` when the user attempts to enter text that does not fit in the field due to either a space limitation (the Field object property `doNotScroll` is set to `true`) or the maximum character limit (the Field object property `charLimit` is set to a positive value). When `fieldFull` is `true`, `event.changeEx` is set to the entire text string the user attempted to enter and `event.change` is the text string cropped to what fits within the field.

Only available in keystroke events for text fields.

Type

Boolean

Access

R

Events

Keystroke

Example 1

This is a custom keystroke script for a text field that has a character limit. When the field gets filled, or if the user commits the data entered, the focus moves to another field.

```
if ( event.fieldFull || event.willCommit )
   this.getField("NextTabField").setFocus();
```

Example 2

Test whether the user has overfilled the text field. A custom keystroke script for a text field. Initially, the field is set so that text does not scroll.

```
if ( event.fieldFull )
{
   app.alert("You've filled the given space with text,"
   + " and as a result, you've lost some text. I'll set the field to"
   + " scroll horizontally, and paste in the rest of your"
   + " missing text.");
   this.resetForm([event.target.name]);     // Reset field to lose focus
   event.target.doNotScroll = false;        // Make changes
   event.change = event.changeEx;
}
```

Field properties generally cannot be changed during a keystroke event, so it is necessary for the field to lose focus as a way to commit the data. The user then has to reset the focus and continue entering data.

keyDown

5.0			

Available only during a keystroke event for list box and combo box. For a list box or the pop-up part of a combo box, the value is `true` if the arrow keys were used to make a selection, `false` otherwise.

For the combo box, `keyDown` is only available if the pop-up part of it is used, that is, a selection (with the mouse or the keyboard) is being made from the pop-up. If the combo is editable and the user types in an entry, the `Field/Keystroke` event behaves as for a text field (that is, there are no `changeEx` or `keyDown` event properties).

Type

Boolean

Access

R

modifier

3.01			

Specifies whether the modifier key is down during a particular event. The modifier key on the Microsoft Windows platform is Control and on the Mac OS platform is Option or Command. This property is not supported on UNIX.

Type

Boolean

Access

R

name

4.05			

The name of the current event as a text string. The `type` and name together uniquely identify the event. Valid names are:

```
Keystroke        Mouse Exit
Validate         WillPrint
Focus            DidPrint
Blur             WillSave
Format           DidSave
Calculate        Init
Mouse Up         Exec
Mouse Down       Open
Mouse Enter      Close
```

Type

String

Access

R

Events

All

rc

3.01			

Used for validation. Indicates whether a particular event in the event chain should succeed. Set to `false` to prevent a change from occurring or a value from committing. The default is `true`.

Type

Boolean

Access

R/W

Events

Keystroke, Validate, Menu

richChange

6.0			

Specifies the change in value that the user has just typed. The `richChange` property is only defined for rich text fields and mirrors the behavior of the `event.change` property. The value of `richChange` is an array of `Span` objects that specify both the text entered into the field and the formatting. Keystrokes are represented as single member arrays, while rich text pasted into a field is represented as an array of arbitrary length.

When `event.fieldFull` is `true`, `richChangeEx` is set to the entire rich formatted text string the user attempted to enter and `event.richChange` is the rich formatted text string cropped to what fits within the field. Use `event.changeEx` (and `event.change`) to handle (plain) text fields.

Related objects and properties are `event.richValue`, the `Span` object, the Field object `defaultStyle`, `richText`, and `richValue` properties, and the `Annotation` object `richContents` property.

Type

Array of `Span` objects

Access

R/W

Events

Keystroke

Example

This example changes the keystroke to upper case, alternately colors the text blue and red, and switches underlining off and on.

```
// Custom Keystroke event for a rich text field.
var span = event.richChange;
for ( var i=0; i<span.length; i++)
{
   span[i].text = span[i].text.toUpperCase();
   span[i].underline = !span[i].underline;
   span[i].textColor = (span[i].underline) ? color.blue : color.red;
}
event.richChange = span;
```

richChangeEx

6.0			

This property is only defined for rich text fields. It mirrors the behavior of the `event.changeEx` property for text fields. Its value is an array of `Span` objects that specify both the text entered into the field and the formatting. Keystrokes are represented as single member arrays, while rich text pasted into a field is represented as an array of arbitrary length.

If `event.fieldFull` is `true`, `richChangeEx` is set to the entire rich formatted text string the user attempted to enter and `event.richChange` is the rich formatted text string cropped to what fits within the field. Use `event.changeEx` (and `event.change`) to handle (plain) text fields.

Related objects and properties include `event.richChange`, `event.richValue`, the `Span` object, the Field object `defaultStyle`, `richText`, and `richValue` properties, and the Annotation object `richContents` property.

Type

Array of `Span` objects

Access

R/W

Events

Keystroke

Example

If the text field is filled up by the user, allow additional text by setting the field to scroll.

```
if ( event.fieldFull )
{
   app.alert("You've filled the given space with text,"
   + " and as a result, you've lost some text. I'll set the field to"
```

```
    + " scroll horizontally, and paste in the rest of your"
    + " missing text.");
    this.resetForm([event.target.name]);     // Reset field to lose focus
    event.target.doNotScroll = false;        // Make changes
    if ( event.target.richText )
      event.richChange = event.richChangeEx
    else
      event.change = event.changeEx;
}
```

See also `event.fieldFull`.

richValue

6.0			

This property mirrors the `richValue` property of the Field object and the `event.value` property for each event.

Related objects and properties include the `Span` object, the Field object properties `defaultStyle`, `richText`, `richValue`, `event.richChange`, event.`richChangeEx`, and the Annotation object `richContents` property.

Type

Array of `Span` objects

Access

R/W

Events

Keystroke

Example

Turn all bold text into red underlined text.

```
// Custom format event for a rich text field.
var spans = event.richValue;
for ( var i = 0; i < spans.length; i++ )
{
   if( spans[i].fontWeight >= 700 )
   {
      spans[i].textColor = color.red;
      spans[i].fontWeight = 400;      // change to default weight
      spans[i].underline = true;
   }
}
event.richValue = spans;
```

selEnd

3.01			

The ending position of the current text selection during a keystroke event.

Type

Integer

Access

R/W

Example

Merge the last change (of a text field) with the uncommitted change. The function uses both `selEnd` and `selStart`.

```
function AFMergeChange(event)
{
  var prefix, postfix;
  var value = event.value;

  if(event.willCommit) return event.value;
  if(event.selStart >= 0)
    prefix = value.substring(0, event.selStart);
  else prefix = "";
  if(event.selEnd >= 0 && event.selEnd <= value.length)
    postfix = value.substring(event.selEnd, value.length);
  else postfix = "";
  return prefix + event.change + postfix;
}
```

selStart

3.01			

The starting position of the current text selection during a keystroke event.

Type

Integer

Access

R/W

Example

See the example following `selEnd`.

shift

3.01			

`true` if the shift key is down during a particular event, `false` otherwise.

Type

Boolean

Access

R

Example

The following is a mouse-up button action:

```
if (event.shift)
   this.gotoNamedDest("dest2");
else
   this.gotoNamedDest("dest1");
```

source

5.0			

The Field object that triggered the calculation event. This object is usually different from the `target` of the event, which is the field that is being calculated.

Type

Object

Access

R

target

3.01			

The target object that triggered the event. In all mouse, focus, blur, calculate, validate, and format events, it is the Field object that triggered the event. In other events, such as page open and close, it is the Doc or `this` object.

Type

Object

Access

R

targetName

5.0			

Tries to return the name of the JavaScript being executed. Can be used for debugging purposes to help identify the code causing exceptions to be thrown. Common values of `targetName` include:

- The folder-level script file name for `App/Init` events
- The document-level script name for`Doc/Open` events
- The PDF file name being processed for `Batch/Exec` events
- The field name for `Field` events
- The menu item name for `Menu/Exec` events
- The screen annotation name for `Screen` events (multimedia events)

When an exception is thrown, `targetName` is reported if there is an identifiable name.

Type

String

Access

R

Example

The first line of the folder-level JavaScript file conserve . `js` has an error in it. When the viewer starts, an exception is thrown and the message reveals the source of the problem.

```
MissingArgError: Missing required argument.
App.alert:1:Folder-Level:App:conserve.js
 ===> Parameter cMsg.
```

type

5.0			

The type of the current event. The type and `name` together uniquely identify the event. Valid types are:

```
Batch           External
Console         Bookmark
App             Link
Doc             Field
Page            Menu
```

Type

String

Access

R

value

3.01			

This property has different meanings for different `field` events:

- For the `Field/Validate` event, it is the value that the field contains when it is committed. For a combo box, it is the face value, not the export value (see `changeEx`).

  For example, the following JavaScript verifies that the field value is between zero and 100:

  ```
  if (event.value < 0 || event.value > 100) {
     app.beep(0);
     app.alert("Invalid value for field " + event.target.name);
     event.rc = false;
  }
  ```

- For a `Field/Calculate` event, JavaScript should set this property. It is the value that the field should take upon completion of the event.

  For example, the following JavaScript sets the calculated value of the field to the value of the SubTotal field plus tax.

  ```
  var f = this.getField("SubTotal");
  event.value = f.value * 1.0725;
  ```

- For a `Field/Format` event, JavaScript should set this property. It is the value used when generating the appearance for the field. By default, it contains the value that the user has committed. For a combo box, this is the face value, not the export value (see `changeEx` for the export value).

  For example, the following JavaScript formats the field as a currency type of field.

  ```
  event.value = util.printf("$%.2f", event.value);
  ```

- For a `Field/Keystroke` event, it is the current value of the field. If modifying a text field, for example, this is the text in the text field before the keystroke is applied.
- For `Field/Blur` and `Field/Focus` events, it is the current value of the field. During these two events, `event.value` is read only. That is, the field value cannot be changed by setting `event.value`.

  Beginning with Acrobat 5.0, for a list box that allows multiple selections (see `field.multipleSelection`), the following behavior occurs. If the field value is an array (that is, multiple items are selected), `event.value` returns an empty string when getting, and does not accept setting.

Type

Various

Access

R/W

willCommit

3.01			

Verifies the current keystroke event before the data is committed. It can be used to check target form field values to verify, for example, whether character data was entered instead of numeric data. JavaScript sets this property to `true` after the last `keystroke` event and before the field is validated.

Type

Boolean

Access

R

Example

This example shows the structure of a keystroke event.

```
var value = event.value
if (event.willCommit)
   // Final value checking.
else
   // Keystroke-level checking.
```

EventListener

This object is a collection of multimedia event methods with optional local data. Event method names begin with `on` or `after`, followed by the event name, for example, `onPause` or `afterPause`. When an event is dispatched, matching `on` event methods are called immediately and matching `after` event methods are called a short while later, at the next idle time.

`on` event methods have certain restrictions:

- An `on` event method for a `MediaPlayer` object cannot call any of that MediaPlayer's methods, nor can it call any other Acrobat methods that may indirectly cause a method of the MediaPlayer to be called. For example, an `on` method must not close the document, save it, change the active page, change the focus, or anything else that may eventually call a method of the MediaPlayer.
- `on` event methods cannot be reentered.

`after` event methods do not have these restrictions and therefore are more versatile for most purposes. Use an `on` event method only when the event must be processed synchronously, such as an `onGetRect` method.

Inside an event method, `this` is the EventListener object. The document is available in `event.media.doc` and the event target (MediaPlayer or ScreenAnnot) is in `event.target`.

`Events.add` installs EventListener objects for dispatching, `Events.dispatch` dispatches an event to the matching event methods, and `Events.remove` removes EventListener objects from the dispatch table.

Example

Install `onPlay` and `afterPlay` event listeners using two techniques. These listeners report back to the console when there are executed.

```
// Create a simple MediaEvents object
var events = new app.media.Events
({
   // Called immediately during a Play event:
   onPlay: function() { console.println( "onPlay" ); },

   // Called during idle time after the Play event:
   afterPlay: function() { console.println( "afterPlay" ); },
});
var player = app.media.createPlayer({events: events});
player.events.add({
   afterPlay: function( e ) {
      app.alert("Playback started, doc.URL = " + e.media.doc.URL );
   }
});
player.open();
```

EventListener methods

The events listed here are specific to multimedia.

In addition to these events, a screen annotation may receive the standard events used elsewhere in Acrobat (Destroy, Mouse Up, Mouse Down, Mouse Enter, Mouse Exit, Page Open, Page Close, Page Visible, Page Invisible, Focus, and Blur). See the `event` object for details on those events.

afterBlur

6.0			

The Blur event is triggered when a MediaPlayer or screen annotation loses the keyboard focus after having it. See also `onBlur` (the difference between `on` and `after` event methods are explained on page 386).

Parameters

`oMediaEvent`	An `event` object that is automatically passed to this EventListener.

Example

The following script is executed as a Rendition action. The user clicks the screen annotation to open but not play the movie clip. Clicking outside the screen annotation (a Blur event) plays the movie. Clicking the screen annotation (a Focus event) while the movie is playing pauses the movie. To continue, the user clicks outside the screen annotation again.

```
var playerEvents = new app.media.Events
({
   afterBlur: function () { player.play(); },
   afterFocus: function () { player.pause(); }
});
var settings = { autoPlay: false };
var args = { settings: settings, events: playerEvents};
var player = app.media.openPlayer(args);
```

See also `afterFocus`.

afterClose

6.0			

The Close event is triggered when a media player is closed for any reason. See also `onClose` (the difference between `on` and `after` event methods are explained on page 386).

To start another media player from the Close event, be sure to test `doc.media.canPlay` first to make sure playback is allowed. For example, playback may not be allowed because the document is closing.

The `event` object for a Close event includes these properties in addition to the standard event properties:

`media.closeReason`	Why the player was closed, from `app.media.closeReason`.
`media.hadFocus`	Did the player have the focus when it was closed?

When a player closes while it has the focus, it first receives a Blur event and then the Close event. In the Close event, `media.hadFocus` indicates whether the player had the focus before closing.

When the `afterClose` event method is called, the MediaPlayer has already been deleted and its JavaScript object is dead.

Parameters

`oMediaEvent`	An `event` object that is automatically passed to this EventListener.

Example

See `onClose` for a representative example.

afterDestroy

6.0			

The Destroy event is triggered when a screen annotation is destroyed.

When the `afterDestroy` event method is called, the screen annotation has already been deleted from the document and its JavaScript object is dead.

See also `onDestroy` (the difference between `on` and `after` event methods are explained on page 386).

Parameters

`oMediaEvent`	An `event` object that is automatically passed to this EventListener.

afterDone

6.0			

The Done event is triggered when media playback reaches the end of media.

See also `onDone` (the difference between `on` and `after` event methods are explained on page 386).

Parameters

`oMediaEvent`	An `event` object that is automatically passed to this EventListener.

afterError

6.0			

The Error event is triggered when an error occurs in a MediaPlayer. See also `onError` (the difference between `on` and `after` event methods are explained on page 386).

The `event` object for an Error event includes these properties in addition to the standard `event` properties:

`media.code`	Status code value.
`media.serious`	True for serious errors, false for warnings.
`media.text`	Error message text.

Parameters

`oMediaEvent`	An `event` object that is automatically passed to this EventListener.

afterEscape

6.0			

The Escape event is triggered when the user presses the Escape key while a MediaPlayer is open and has the keyboard focus. A MediaPlayer may receive an Escape event before it receives the Ready event.

See also `onEscape` (the difference between `on` and `after` event methods are explained on page 386).

Parameters

`oMediaEvent`	An `event` object that is automatically passed to this EventListener.

afterEveryEvent

6.0			

If an `Events` object contains an `onEveryEvent` or `afterEveryEvent` property, its EventListener methods are called for every event, not just a specific one. (The difference between `on` and `after` event methods are explained on page 386).

The EventListener functions in an `onEveryEvent` or `afterEveryEvent` property are called before any listener functions that name the specific event.

Parameters

`oMediaEvent`	An `event` object that is automatically passed to this EventListener.

Example

Have `onEveryEvent`, `afterEveryEvent`, `onPlay` and `afterPlay` report back to the console.

```
var events = new app.media.Events(
{
   // This is called immediately at the start of every event:
   onEveryEvent: function( e )
   { console.println( 'onEveryEvent, event = ' + e.name ); },

   // This is called during a Play event, after onEveryEvent is
   // called:
   onPlay: function() { console.println( "onPlay" ); },

   // This is called for every event, but later during idle time:
   afterEveryEvent: function( e )
   { console.println( "afterEveryEvent, event = " + e.name ); },

   // This is called during idle time after a Play event,
   // and after afterEveryEvent is called:
   afterPlay: function() { console.println( "afterPlay" ); },
});
```

afterFocus

6.0			

The Focus event is triggered when a MediaPlayer or screen annotation gets the keyboard focus. See also `onFocus` (the difference between `on` and `after` event methods are explained on page 386).

Parameters

`oMediaEvent`	An `event` object that is automatically passed to this EventListener.

Example

See `afterBlur` for an example of usage.

afterPause

6.0			

The Pause event is triggered when media playback pauses, either because of user interaction or when the `pause` method is called. See also `onPause` (the difference between `on` and `after` event methods are explained on page 386).

Parameters

`oMediaEvent`	An `event` object that is automatically passed to this EventListener.

afterPlay

6.0			

The Play event is triggered when media playback starts or resumes, either because of user interaction or when the `play` method is called. See also `onPlay` (the difference between `on` and `after` event methods are explained on page 386).

Parameters

`oMediaEvent`	An `event` object that is automatically passed to this EventListener.

afterReady

6.0			

The Ready event is triggered when a newly-created MediaPlayer is ready for use. See also `onReady` (the difference between `on` and `after` event methods are explained on page 386).

Most methods of a `MediaPlayer` object cannot be called until the Ready event is triggered.

Parameters

`oMediaEvent`	An `event` object that is automatically passed to this EventListener.

See `afterScript`, below, `Markers.get` and the `MediaOffset` object.

Example

This (document-level) script plays multiple media clips. For each screen annotation, a media (OpenPlayer) player is opened. When it is ready, the `afterReady` script signals this fact to Multiplayer.

```
// Parameters: doc, page, rendition/annot name, mulitPlayer instance
function OnePlayer( doc, page, name, multiPlayer )
{
   var player = app.media.openPlayer({
      annot: doc.media.getAnnot(
         { nPage: page, cAnnotTitle: name }),
      rendition: doc.media.getRendition( name ),
      settings: { autoPlay: false },
      events: {
         afterReady: function( e ) {
         multiPlayer.afterReady( player );
         },
      }
   });
   return player;
}
```

```
// Parameters: doc, page, list of rendition/annot names
function MultiPlayer( doc, page )
{
   var nPlayersCueing = 0;  // number of players cueing up
   var players = [];        // the SinglePlayers

   this.afterReady = function( player ) {
      if( ! player.didAfterReady ) {
         player.didAfterReady = true;
         nPlayersCueing--;
         if( nPlayersCueing == 0 ) this.play();
      }
   }
   this.play = function() {
      for( var i = 0;  i < players.length;  i++ ) players[i].play();
   }
   for( var i = 2;  i < arguments.length;  i++ ) {
      players[i-2] = new OnePlayer(doc,page,arguments[i],this );
      nPlayersCueing++;
   }
}
```

Playing multiple media clips is accomplished by executing the following code from, for example, a mouse-up action of a form button.

```
var myMultiPlayer = new MultiPlayer( this, 0, "Clip1", "Clip2" );
```

See `afterScript` for another example of `afterReady`.

afterScript

6.0			

The Script event is triggered when a script trigger is encountered in the media during playback. See also `onScript` (the difference between `on` and `after` event methods are explained on page 386).

The `event` object for a Script event includes these properties in addition to the standard `event` properties:

`media.command`	Command name
`media.param`	Command parameter string

These two strings can contain any values that the media clip provides. They do not necessarily contain executable JavaScript code and it is up to the `onScript` or `afterScript` EventListener to interpret them.

Parameters

`oMediaEvent`	An `event` object that is automatically passed to this EventListener.

Example

The following is part of a complete example presented after `MediaPlayer.seek`. The media is an audio clip (`.wma`) of famous quotations, which supports markers and scripts. The `afterReady` listener counts the number of markers, one at the beginning of each quotation. At the end of each quotation, there is also an embedded command script. The `afterScript` listener watches for these commands and if it is a `pause` command, it pauses the player.

```
var nMarkers=0;
var events = new app.media.Events;
events.add({
   // Count the number of quotes in this audio clip, save as nMarkers
   afterReady: function() {
      var g = player.markers;
      while ( (index =  g.get( { index: nMarkers } ) ) != null )
         nMarkers++;
   },
   // Each quote should be followed by a script, if the command is to
   // pause, then pause the player.
   afterScript: function( e ) {
      if ( e.media.command == "pause" ) player.pause();
   }
});
var player = app.media.openPlayer({
   rendition: this.media.getRendition( "myQuotes" ),
   settings: { autoPlay: false },
   events: events
});
```

afterSeek

6.0			

The Seek event is triggered when a MediaPlayer is finished seeking to a playback offset as a result of a `seek` call. See also `onSeek` (the difference between `on` and `after` event methods are explained on page 386).

Not all media players trigger Seek events.

Parameters

`oMediaEvent`	An `event` object that is automatically passed to this EventListener.

afterStatus

6.0			

The Status event is triggered on various changes of status that a MediaPlayer reports. See also `onStatus` (the difference between `on` and `after` event methods are explained on page 386).

The `event` object for a Status event includes these properties in addition to the standard `event` properties:

`media.code`	Status code value, defined in `app.media.status`.
`media.text`	Status message text.

The following values are used only by some media players and only when `media.code == app.media.status.buffering`. They are zero otherwise.

`media.progress`	Progress value from 0 to media.total.
`media.total`	Maximum progress value.

Parameters

`oMediaEvent`	An `event` object that is automatically passed to this EventListener.

Example

Monitor the status of the player, as executed from a Rendition event associated with a screen annotation.

```
var events = new app.media.Events
events.add({
   afterStatus: function ( e ) {
      console.println( "Status code " + e.media.code +
         ", description: " + e.media.text);
   }
});
app.media.openPlayer({ events: events });
```

afterStop

6.0			

The Stop event is triggered when media playback stops, either because of user interaction or when the `stop` method is called. See also `onStop` (the difference between `on` and `after` event methods are explained on page 386).

Parameters

`oMediaEvent`	An `event` object that is automatically passed to this EventListener.

onBlur

6.0			

The Blur event is triggered when a MediaPlayer or screen annotation loses the keyboard focus after having it. See also `afterBlur` (the difference between `on` and `after` event methods are explained on page 386).

Parameters

`oMediaEvent`	An `event` object that is automatically passed to this EventListener.

onClose

6.0			

The Close event is triggered when a MediaPlayer is closed for any reason. See also `afterClose` (the difference between `on` and `after` event methods are explained on page 386).

To start another media player from the Close event, be sure to test `doc.media.canPlay` first to make sure playback is allowed. For example, playback may not be allowed because the document is closing.

The `event` object for a Close event includes these properties in addition to the standard `event` properties:

`media.closeReason`	Why the player was closed, from `app.media.closeReason`
`media.hadFocus`	Did the player have the focus when it was closed?

When a player closes while it has the focus, it first receives a Blur event and then the Close event. In the Close event, `media.hadFocus` indicates whether the player had the focus before closing.

When the afterClose event method is called, the MediaPlayer has already been deleted and its JavaScript object is dead.

Parameters

`oMediaEvent`	An `event` object that is automatically passed to this EventListener.

Example

This script gets information about why the media clip closed, executed from a Rendition action. See `app.media.closeReason`.

```
var playerEvents = new app.media.Events({
   onClose: function (e) {
      var eReason, r = app.media.closeReason;
      switch ( e.media.closeReason )
      {
         case r.general: eReason = "general"; break;
```

```
            case r.error: eReason = "error"; break;
            case r.done: eReason = "done"; break;
            case r.stop: eReason = "stop"; break;
            case r.play: eReason = "play"; break;
            case r.uiGeneral: eReason = "uiGeneral"; break;
            case r.uiScreen: eReason = "uiScreen"; break;
            case r.uiEdit: eReason = "uiEdit"; break;
            case r.docClose: eReason = "Close"; break;
            case r.docSave: eReason = "docSave"; break;
            case r.docChange: eReason = "docChange"; break;
        }
        console.println("Closing...The reason is  " + eReason );
    }
});
app.media.openPlayer({ events: playerEvents });
```

onDestroy

6.0			

The Destroy event is triggered when a screen annotation is destroyed. See also `afterDestroy` (the difference between `on` and `after` event methods are explained on page 386).

Parameters

`oMediaEvent`	An `event` object that is automatically passed to this EventListener.

onDone

6.0			

The Done event is triggered when media playback reaches the end of media. See also `afterDone` (the difference between `on` and `after` event methods are explained on page 386).

Parameters

`oMediaEvent`	An `event` object that is automatically passed to this EventListener.

onError

6.0			

The Error event is triggered when an error occurs in a MediaPlayer. See also `afterError` (the difference between `on` and `after` event methods are explained on page 386).

The `event` object for an Error event includes these properties in addition to the standard `event` properties:

`media.code`	Status code value
`media.serious`	`true` for serious errors, `false` for warnings
`media.text`	Error message text

Parameters

`oMediaEvent`	An `event` object that is automatically passed to this EventListener.

onEscape

6.0			

The Escape event is triggered when the user presses the Escape key while a MediaPlayer is open and has the keyboard focus. A MediaPlayer may receive an Escape event before it receives the Ready event.

See also `afterEscape` (the difference between `on` and `after` event methods are explained on page 386).

Parameters

`oMediaEvent`	An `event` object that is automatically passed to this EventListener.

onEveryEvent

6.0			

If an `Events` object contains an `onEveryEvent` or `afterEveryEvent` property, its EventListener methods are called for every event, not just a specific one.

The EventListener methods in an `onEveryEvent` or `afterEveryEvent` property are called before any listener functions that name the specific event. (The difference between `on` and `after` event methods are explained on page 386).

Parameters

`oMediaEvent`	An `event` object that is automatically passed to this EventListener.

onFocus

6.0			

The Focus event is triggered when a MediaPlayer or screen annotation gets the keyboard focus. See also `afterFocus` (the difference between `on` and `after` event methods are explained on page 386).

Parameters

`oMediaEvent`	An `event` object that is automatically passed to this EventListener.

onGetRect

6.0			

The GetRect event is triggered whenever the multimedia plug-in needs to get the display rectangle for a docked MediaPlayer.

The `event` object for a GetRect event includes this property in addition to the standard `event` properties:

`media.rect`	Player rectangle, an array of four numbers in device space

The `onGetRect` method must set this property in the `oMediaEvent` before returning.

Note: Although you can write an `afterGetRect` listener, there is no useful purpose for it. If it returns a `rect` property, it will be ignored. The `onGetRect` listener is where the `rect` property must be set.

Parameters

`oMediaEvent`	An `event` object that is automatically passed to this EventListener.

Example

Page 0 has a series of (thumbnail-size) ScreenAnnots and page 1 is a blank page. Put the viewer into continuous facing mode so that both pages are seen side-by-side. Below is a typical Rendition action or mouse-up button JavaScript action.

```
var rendition = this.media.getRendition("Clip1");
var settings = rendition.getPlaySettings();
var annot = this.media.getAnnot({ nPage:0,cAnnotTitle:"ScreenClip1" });
var player = app.media.openPlayer({
   rendition: rendition,
   annot: annot,
   settings: { windowType: app.media.windowType.docked },
   events:
   {
      onGetRect: function (e) {
         var width = e.media.rect[2] - e.media.rect[0];
         var height = e.media.rect[3] - e.media.rect[1];
         width *= 3; // Triple width and height
```

```
            height *= 3;
            e.media.rect[0] = 36; // Move left,upper to
            e.media.rect[1] = 36; // upper left-hand corner
            e.media.rect[2] = e.media.rect[0]+width;
            e.media.rect[3] = e.media.rect[1]+height;
            return e.media.rect; // Return this
        }
    }
});
player.page = 1; // show on page 1, this triggers an onGetRect event.
```

See `MediaPlayer.page` and `MediaPlayer.triggerGetRect` for a variation on this same example.

onPause

6.0			

The Pause event is triggered when media playback pauses, either because of user interaction or when the `play` method is called. See also `afterPause` (the difference between `on` and `after` event methods are explained on page 386).

Parameters

`oMediaEvent`	An `event` object that is automatically passed to this EventListener.

onPlay

6.0			

The Play event is triggered when media playback starts or resumes, either because of user interaction or when the `pause` method is called. See also `afterPlay` (the difference between `on` and `after` event methods are explained on page 386).

Parameters

`oMediaEvent`	An `event` object that is automatically passed to this EventListener.

onReady

6.0			

The Ready event is triggered when a newly-created MediaPlayer is ready for use. Most methods of a `MediaPlayer` object cannot be called until the Ready event is triggered. See also `afterReady` (the difference between `on` and `after` event methods are explained on page 386).

Parameters

`oMediaEvent`	An `event` object that is automatically passed to this EventListener.

onScript

6.0			

The Script event is triggered when a script trigger is encountered in the media during playback. See also `afterScript` (the difference between `on` and `after` event methods are explained on page 386).

The `event` object for a Script event includes these properties in addition to the standard `event` properties:

`media.command`	Command name
`media.param`	Command parameter string

These two strings can contain any values that the media clip provides. They do not necessarily contain executable JavaScript code and it is up to the `onScript` or `afterScript` EventListener to interpret them.

Parameters

`oMediaEvent`	An `event` object that is automatically passed to this EventListener.

onSeek

6.0			

The Seek event is triggered when a MediaPlayer is finished seeking to a playback offset as a result of a `seek` call. Not all media players trigger Seek events.

See also `afterSeek` (the difference between `on` and `after` event methods are explained on page 386).

Parameters

`oMediaEvent`	An `event` object that is automatically passed to this EventListener.

onStatus

6.0			

The Status event is triggered on various changes of status that a MediaPlayer reports. See also `afterStatus` (the difference between `on` and `after` event methods are explained on page 386).

The `event` object for a Status event includes these properties in addition to the standard `event` properties:

`media.code`	Status code value, defined in `app.media.status`
`media.text`	Status message text

The following values are used only by some media players, and only when `media.code == app.media.status.buffering`. They are zero otherwise.

`media.progress`	Progress value from 0 to media.total
`media.total`	Maximum progress value

Parameters

`oMediaEvent`	An `event` object that is automatically passed to this EventListener.

onStop

6.0			

The Stop event is triggered when media playback stops, either because of user interaction or when the `stop` method is called.

See also `afterStop` (the difference between `on` and `after` event methods are explained on page 386).

Parameters

`oMediaEvent`	An `event` object that is automatically passed to this EventListener.

Events

A multimedia Events object is a collection of `EventListener` objects. The `events` property of a `MediaPlayer` object or a `ScreenAnnot` object is an Events object.

The constructor for an Events object is `app.media.Events`.

Example

This following is executed as a rendition action.

```
console.println("Ready to play \"" + event.action.rendition.uiName
   +"\" from screen annot \"" + event.targetName + "\".");
// Create a simple app.media.Events object
var events = new app.media.Events({
   // The Event object is passed as a parameter to all event
   // listeners, this is a the parameter "e" below/
   // Called immediately during a Play event:
   onPlay: function( e ) { console.println( "onPlay: media.id = "
      + e.media.id  ); },
   // Called during idle time after the Play event:
   afterPlay: function() { console.println( "afterPlay" ); },
});
var player = app.media.openPlayer({ events: events });
```

Events methods

add

6.0			

Adds any number of `EventListener` objects to the dispatch table for this `Events` object. Any previous listeners are preserved and when an event is triggered, all matching listener methods are called.

The standard event dispatcher first calls any `onEveryEvent` methods in the order they were added, then calls any `on` events for the specific event being dispatched, also in the order they were added. Finally, it sets a very short timer (one millisecond) to call any `after` events. When that timer is triggered, the `after` events are called in the same order described for on events.

See the description of `on` and `after` events in the introductory paragraphs to `EventListener` object.

Note: If you try to add the same EventListener twice, the second attempt is ignored.

If you add an EventListener from inside an event method, the new listener's methods will be called as part of the dispatching for the current event.

Parameters

Any number of parameters, each one an `EventListener` object.

Example

Add an EventListener for the onPlay event. The player is a MediaPlayer object.

```
player.events.add
({
   onPlay: function() { console.println( "onPlay" ); }
});
```

See also remove.

dispatch

6.0			

When a MediaPlayer triggers an event, the Multimedia plug-in creates an `event` object and calls `MediaPlayer.events.dispatch(event)`. Similarly, a ScreenAnnot calls `ScreenAnnot.events.dispatch(event)`.

The dispatch method is the only part of the event dispatching system that the Acrobat Multimedia plug-in calls directly. You can substitute your own, entirely different event dispatching system by providing your own `MediaPlayer.events` object with its own `dispatch` method.

The `dispatch` method is responsible for calling each of the EventListeners associated with the event, as identified by `oMediaEvent.name`. In most cases, a PDF file will not provide its own `dispatch` method but will use the standard event dispatching system.

Parameters

`oMediaEvent`	An `event` object.

If you write your own `dispatch` method, note that `oMediaEvent.name` may contain spaces. The standard `dispatch` method makes a copy of `oMediaEvent.name` in `oMediaEvent.media.id` with the spaces removed, to allow the name to be used directly as part of a JavaScript event method name.

Also, if you write your own `dispatch` method, it will be called synchronously when each event occurs, and any processing you do will be subject to the same limitations as described for `on` event methods (see EventListener object). In particular, the method cannot make any calls to a `MediaPlayer` object nor do anything that can indirectly cause a MediaPlayer method to be called.

The `dispatch` method is not usually called directly from JavaScript code, although it can be.

Example

Create a new media player with a custom event dispatcher. This is an advanced technique that would rarely be used in a typical PDF JavaScript.

```
var player = doc.media.newPlayer(
{
   events:
   {
      dispatch: function( e )
      {
```

```
        console.println( 'events.dispatch' + e.toSource() );
      }
    }
});
// Synthesize and dispatch a Script event, as if one had been
// encountered while the media was playing. With the standard event
// dispatcher, this will call any and all event listeners that have been
//  added for this event. With the custom dispatcher above, it will log a
//  message to the console.
var event = new Event;
event.name = "Script";
event.media = { command: "test", param: "value" };
player.events.dispatch( event );
```

remove

6.0			

The method removes one or more EventListeners that were previously added with `Events.add`. If you use an object literal directly in `Events.add`, you will not be able to remove that listener using `Media.remove` because there is no way to pass a reference to the same object. To be able to remove an EventListener, you must pass it to the `add` method in a variable instead of as an object literal, so that you can pass the same variable to `remove`, as in the example below.

The `remove` method can be called from inside an event method to remove any EventListener, even the listener that the current event method is part of. The current event method continues executing, but no other event methods in the same EventListener object will be called.

Parameters

Any number of `EventListener` objects.

Example

Assume `player` is a MediaPlayer object.

```
var listener = { afterStop: function() { app.alert("Stopped!"); } }
player.events.add( listener );       // Add listener
.....
player.events.remove( listener );    // Later, remove it
```

FDF

6.0		S	

This object corresponds to a PDF-encoded data exchange file. Typically, FDF files contain forms data that is exported from a PDF file. However, FDF files can also be used as general purpose data files and it is for this latter purpose that the FDF object exists.

All methods and properties marked with S in their quick bar are available only during batch, console, and application initialization events. See "Privileged versus non-privileged context" on page 32 for details.

FDF properties

deleteOption

6.0		S	X

Indicates whether the FDF file should be automatically deleted after it is processed. This value may or may not be used, depending on the content of the FDF file and how it is processed. It is used for embedded files beginning in Acrobat 6.0. Allowed values are

`0` — (default) Acrobat will automatically delete the FDF file after processing

`1` — Acrobat will not delete the FDF file after processing (however, a web or email browser may still delete the file).

`2` — Acrobat will prompt the user to determine whether to delete the FDF file after processing (however, a web or email browser may still delete the file).

Type

Integer

Access

R/W

isSigned

6.0			X

Returns `true` if the FDF data file is signed.

Type

Boolean

Access

R

Example

See if the fdf is signed.

```
var fdf = app.openFDF("/C/temp/myDoc.fdf");
console.println( "It is "+ fdf.isSigned + " that this FDF is signed");
fdf.close();
```

See a more complete example following signatureSign.

numEmbeddedFiles

6.0			X

The number of files embedded in the FDF file. If the FDF object is a valid FDF file, no exceptions will be thrown.

A file may be embedded in an FDF file with the addEmbeddedFile method.

Type

Integer

Access

R

Example

Create a new FDF object, embed a PDF doc, save the FDF, open the FDF again, and count the number of embedded files.

```
var fdf = app.newFDF();
fdf.addEmbeddedFile("/C/myPDFs/myDoc.pdf");
fdf.save("/c/temp/myDocWrapper.fdf");
fdf = app.openFDF("/c/temp/myDocWrapper.fdf");
console.println("The number of embedded files = "
   + fdf.numEmbeddedFiles);
fdf.close();
```

FDF methods

addContact

6.0		S	X

Adds a contact to the FDF file.

Parameters

`oUserEntity`	An `UserEntity` object that list the contact to be added to the FDF file.

Returns

Throws an exception on failure.

Example

```
var oEntity={firstName:"Fred", lastName:"Smith", fullName:"Fred Smith"};
var f = app.newFDF();
f.addContact( oEntity );
f.save( "/c/temp/FredCert.fdf" );
```

addEmbeddedFile

6.0		S	X

Add the specified file to the end of the array of embedded files in the FDF file. Anyone opening the FDF file will be instructed to save the embedded file or files according to `nSaveOption`. If the embedded file is a PDF file, it is opened and displayed. If the embedded file is an FDF file, the file is opened for processing.

FDF files containing embedded files have been supported beginning with Acrobat 4.05. An example use for embedding PDF files is when these files are hosted on an HTTP server and the user should click to download and save the PDF file, rather than viewing the file in the browser. There is no relationship between these embedded files and files that are associated with forms data that is stored in an FDF file.

Parameters

`cDIPath`	(optional) A device-independent absolute path to a file on the user's hard drive. If not specified, the user is prompted to locate a file.
`nSaveOption`	(optional) Specifies how the embedded file will be presented to the user opening this FDF file, where the file will be saved, and whether the file will be deleted after it is saved. Values are: `0` — The file will be saved to the Acrobat document folder. In Acrobat 8, the user will see a confirmation dialog which must be agreed to before the file will be saved to the disk `1` — (the default) The user will be prompted for a file name to which to save the embedded file. `2` — Should not be used. `3` — The file will be automatically saved as a temporary file and deleted during cleanup (when Acrobat is closed). In Acrobat 4.05 through 5.05, for values of `0` and `3`, the user is prompted for the location of the save folder if they have not already set this value. For all values of `nSaveOption`, if the file is a PDF or FDF file, it is automatically opened by Acrobat after it is saved.

Returns

Throws an exception if this operation could not be completed, otherwise returns the number of embedded files that are now in the FDF file.

Example

Create a new FDF, embed a PDF doc, then save.

```
var fdf = app.newFDF();
fdf.addEmbeddedFile("/C/myPDFs/myDoc.pdf");
fdf.save("/c/temp/myDocs.fdf");
```

addRequest

6.0		S	X

Adds a request to the FDF file. There can be only one request in an FDF file. If the FDF file already contains a request, it is replaced with this new request.

Parameters

`cType`	What is being requested. Currently the only valid value is the string “CMS”, which is a request for contact information.
`cReturnAddress`	The return address string for the request. This must begin with `mailto:`, `http:` or `https:` and be of the form `"http://www.example.com/cgi.pl"` or `"mailto:jdoe@example.com"`.
`cName`	(optional) The name of the person or organization that has generated the request.

Returns

Throws an exception if there is an error.

Example

```
var f = app.newFDF();
f.addRequest( "CMS", "http://www.example.com/cgi.pl", "Acme Corp" );
f.save( "/c/tmp/request.fdf" );
```

close

6.0		S	X

Immediately closes the FDF file.

Returns

Throws an exception if there is an error.

See the `FDF` object `save` method, which also closes an FDF file.

Example

See example following the `addEmbeddedFile` method.

mail

6.0		S	X

Saves the `FDF` object as a temporary FDF file and mails this file as an attachment to all recipients, with or without user interaction. The temporary file is deleted after it is no longer needed.

See also app.`mailGetAddrs`, `app.mailMsg`, the Doc methods `mailDoc` and `mailForm`, and the `Report` object method `mail`.

Note: On Windows, the client computer must have its default mail program configured to be MAPI enabled to use this method.

Parameters

`bUI`	(optional) Specifies whether to display a user interface. If `true` (the default), the rest of the parameters are used to seed a compose-new-message window that is displayed to the user. If `false`, the `cTo` parameter is required and all others are optional. **Note:** (Acrobat 7.0) When this method is executed in a non-privileged context, the `bUI` parameter is not honored and defaults to `true`. See "Privileged versus non-privileged context" on page 32.
`cTo`	(optional) A semicolon-separated list of recipients for the message.
`cCc`	(optional) A semicolon-separated list of CC recipients for the message.
`cBcc`	(optional) A semicolon-separated list of BCC recipients for the message.
`cSubject`	(optional) The subject of the message. The length limit is 64 KB.
`cMsg`	(optional) The content of the message. The length limit is 64 KB.

Returns

Throws an exception if there is an error.

Example

```
var fdf = app.openFDF( "/c/temp/myDoc.fdf" );
/* This opens the compose new message window */
fdf.mail();

/* This will send out the mail with the attached FDF file to fun1@example.com
and fun2@example.com */
fdf.mail( false, "fun1@example.com", "fun2@example.com", "",
   "This is the subject", "This is the body.");
```

save

6.0		S	X

Save the `FDF` object as a file. A save will always occur. The file is closed when it is saved and the `FDF` object no longer contains a valid object reference.

See the `close` method, which also closes a FDF file.

Parameters

`cDIPath`	The device-independent path of the file to be saved. **Note:** `cDIPath` must be a safe path (see "Safe path" on page 31) and must have an extension of `.fdf`.

Returns

Throws an exception if there is an error.

Example

Create a new FDF, embed a PDF doc, then save.

```
var fdf = app.newFDF()
fdf.addEmbeddedFile("/C/myPDFs/myDoc.pdf");
fdf.save("/c/temp/myDocs.fdf");
```

signatureClear

6.0		S	X

If the `FDF` object is signed, clears the signature and returns `true` if successful. Does nothing if the `FDF` object is not signed. Does not save the file.

Returns

`true` on success.

signatureSign

6.0		S	X

Sign the `FDF` object with the specified security object. `FDF` objects can be signed only once. The `FDF` object is signed in memory and is not automatically saved as a file to disk. Call `save` to save the `FDF` object after it is signed. Call `signatureClear` to clear FDF signatures.

Parameters

`oSig`	The `SecurityHandler` object that is to be used to sign. Security objects normally require initialization before they can be used for signing. Check the documentation for your security handler to see if it is able to sign FDF files. The `signFDF` property of the SecurityHandler object will indicate whether a particular security object is capable of signing FDF files.
`oInfo`	(optional) A `SignatureInfo` object containing the writable properties of the signature.
`nUI`	(optional) The type of dialog box to show when signing. Values are: `0` — Show no dialog box. `1` — Show a simplified dialog box with no editable fields (fields can be provided in `oInfo`). `2` — Show a more elaborate dialog box that includes editable fields for reason, location, and contact information. The default is `0`.
`cUISignTitle`	(optional) The title to use for the sign dialog box. It is used only if `nUI` is non-zero.
`cUISelectMsg`	(optional) A message to display when a user must select a resource for signing, such as selecting a credential. It is used only when `nUI` is non-zero.

Returns

`true` if the signature was applied successfully, `false` otherwise.

Example

Open an existing FDF data file and sign.

```
var eng = security.getHandler( "Adobe.PPKLite" );
eng.login("myPassword" ,"/c/test/Acme.pfx");
var myFDF = app.openFDF( "/c/temp/myData.fdf" );
if( !myFDF.isSigned ) {
   myFDF.signatureSign({
      oSig: eng,
      nUI: 1,
      cUISignTitle: "Sign Embedded File FDF",
      cUISelectMsg: "Please select a Digital ID to use to "
         + "sign your embedded file FDF."
   });
   myFDF.save( "/c/temp/myData.fdf" );
};
```

signatureValidate

6.0			✗

Validate the signature of an `FDF` object and return a `SignatureInfo` object specifying the properties of the signature.

Parameters

`oSig`	(optional) The security handler to be used to validate the signature. Can be either a `SecurityHandler` object or a generic object with the following properties: **`oSecHdlr`** — The `SecurityHandler` object to use to validate this signature. **`bAltSecHdlr`** — A Boolean value . If `true`, an alternate security handler, selected based on user preference settings, may be used to validate the signature. The default is `false`, meaning that the security handler returned by the signature's `handlerName` property is used to validate the signature. This parameter is not used if `oSecHdlr` is provided. If `oSig` is not supplied, the security handler returned by the signature's `handlerName` property is used to validate the signature.
`bUI`	(optional) If `true`, allow the UI to be shown, if necessary, when validating the data file. The UI may be used to select a validation handler, if none is specified.

Returns

A `SignatureInfo` object. The signature status is described in `status` property.

Example

Open an FDF file, if signed, validate it the signature and return information to the console.

```
fdf = app.openFDF("/c/temp/myDoc.fdf");
eng = security.getHandler( "Adobe.PPKLite" );
if (fdf.isSigned)
{
   var oSigInfo = fdf.signatureValidate({
      oSig: eng,
      bUI: true
   });
   console.println("Signature Status: " + oSigInfo.status);
   console.println("Description: " + oSigInfo.statusText);
} else {
   console.println("FDF not signed");
}
```

Field

This object represents an Acrobat form field (that is, a field created using the Acrobat form tool or the Doc `addField` method). In the same manner that a form author can modify an existing field's properties, such as the border color or font, the JavaScript user can use the Field object to perform the same modifications.

Before a field can be accessed, it must be bound to a JavaScript variable through a method provided by the Doc. More than one variable may be bound to a field by modifying the field's object properties or accessing its methods. This affects all variables bound to that field.

```
var f = this.getField("Total");
```

This example allows the script to manipulate the form field "Total" by means of the variable `f`.

Fields can be arranged hierarchically within a document. For example, form fields with names like "FirstName" and "LastName" are called *flat names* and there is no association between them. By changing the field names, a hierarchy of fields within the document can be created.

For example, "Name.First" and "Name.Last" forms a tree of fields. The period (".") separator in Acrobat forms denotes a hierarchy shift. "Name" in these fields is the parent; "First" and "Last" are the children. Also, the field "Name" is an *internal* field because it has no visible appearance. "First" and "Last" are *terminal* fields that appear on the page.

Acrobat form fields that share the same name also share the same value. Terminal fields can have different presentations of that data. For example, they can appear on different pages, be rotated differently, or have a different font or background color, but they have the same value. Therefore, if the value of one presentation of a terminal field is modified, all others with the same name are updated automatically.

Each presentation of a terminal field is referred to as a *widget*. An individual widget does not have a name but is identified by index (0-based) within its terminal field. The index is determined by the order in which the individual widgets of this field were created (and is unaffected by tab-order).

You can determine the index for a specific widget by using the Fields navigation tab in Acrobat. The index is the number that follows the '#' sign in the field name shown. (In Acrobat 6.0 or later, the widget index is displayed only if the field has more than one widget.) You can double-click an entry in the Fields panel to go to the corresponding widget in the document. Alternatively, if you select a field in the document, the corresponding entry in the Fields panel is highlighted.

Beginning with Acrobat 6.0, `getField` can be used to retrieve the Field object of one individual widget of a field. This notation consists of appending a "." (period) followed by the widget index to the field name passed. When this approach is used, the Field object returned by `getField` encapsulates only one individual widget. You can use the Field objects returned this way anywhere you would use a Field object returned by passing the unaltered field name. However, the set of nodes that are affected may vary, as shown in the following table.

Beginning with Acrobat 8.0, the LiveCycle Reader Extensions Field right is checked for `Field` objects only if the JavaScript code is executed outside the PDF file (from the JavaScript console, through batch execution, or through `JSObject`).

Action	Field object that represents all widgets	Field object that represents one specific widget
Get a widget property	Gets the property of widget # 0.	Gets the property of the widget.

Action	Field object that represents all widgets	Field object that represents one specific widget
Set a widget property	Sets the property of all widgets that are children of that field. (The `rect` property and the `setFocus` method are exceptions that apply to widget # 0. See example below.)	Sets the property of the widget.
Get a field property	Gets the property of the field.	Gets the property of the parent field.
Set a field property	Sets the property of the field.	Sets the property of the parent field.

The following example changes the `rect` property of the second radio button (the first would have index 0) of the field "my radio".

```
var f = this.getField("my radio.1");
f.rect = [360, 677, 392, 646];
```

Field versus widget attributes

Some properties of the Field object, such as `value`, apply to all widgets that are children of that field. Other properties, such as `rect`, are specific to individual widgets.

The following field properties and methods affect field-level attributes:

`calcOrderIndex, charLimit, comb, currentValueIndices,defaultValue, doNotScroll, doNotSpellCheck, delay, doc, editable, exportValues, fileSelect, multiline, multipleSelection, name, numItems,page, password, readonly, required,submitName, type, userName, value, valueAsString, clearItems, browseForFileToSubmit, deleteItemAt, getItemAt, insertItemAt, setAction, setItems,signatureInfo, signatureSign, and signatureValidate.`

The following field properties and methods affect widget-level attributes:

`alignment, borderStyle, buttonAlignX, buttonAlignY, buttonPosition, buttonScaleHow, buttonScaleWhen, display, fillColor, hidden, highlight, lineWidth, print, rect, strokeColor, style, textColor, textFont, textSize, buttonGetCaption, buttonGetIcon, buttonImportIcon, buttonSetCaption, buttonSetIcon, checkThisBox, defaultIsChecked, isBoxChecked, isDefaultChecked, setAction, and setFocus.`

Note: The `setAction` method can apply at the field or widget level, depending on the event. The `Keystroke`, `Validate`, `Calculate`, and `Format` events apply to fields. The `MouseUp`, `MouseDown`, `MouseEnter`, `MouseExit`, `OnFocus`, and `OnBlur` events apply to widgets.

The `checkThisBox`, `defaultIsChecked`, `isBoxChecked`, and `isDefaultChecked` methods take a widget index, `nWidget`, as a parameter. If you invoke these methods on a Field object `f` that represents one specific widget, the `nWidget` parameter is optional (and is ignored if passed) and the method acts on the specific widget encapsulated by `f`.

Field properties

In general, field properties correspond to those stored in field and annotation dictionaries in the PDF document (see the *PDF Reference* version 1.7).

Some property values are stored in the PDF document as names, while others are stored as strings (see the *PDF Reference* version 1.7). For a property that is stored as a name, there is a 127-character limit on the length of the string.

Examples of properties that have a 127-character limit include `value` and `defaultValue` for check boxes and radio buttons. The *PDF Reference* version 1.7 documents all Annotation properties as well as how they are stored.

alignment

3.01	D		F

Controls how the text is laid out within the text field. Values are

```
left
center
right
```

Type

String

Access

R/W

Fields

`text`

Example

```
var f = this.getField("MyText");
f.alignment = "center";
```

borderStyle

3.01	D		F

The border style for a field. Valid border styles are

```
solid
dashed
beveled
inset
underline
```

The border style determines how the border for the rectangle is drawn. The `border` object is a static convenience constant that defines all the border styles of a field, as shown in the following table:

Type	Keyword	Description
`solid`	`border.s`	Strokes the entire perimeter of the rectangle with a solid line.
`beveled`	`border.b`	Equivalent to the `solid` style with an additional beveled (pushed-out appearance) border applied inside the solid border.
`dashed`	`border.d`	Strokes the perimeter with a dashed line.
`inset`	`border.i`	Equivalent to the `solid` style with an additional inset (pushed-in appearance) border applied inside the solid border.
`underline`	`border.u`	Strokes the bottom portion of the rectangle's perimeter.

Type

String

Access

R/W

Fields

All

Example

The following example shows how to set the border style of a field to `solid`:

```
var f = this.getField("MyField");
f.borderStyle = border.s; /* border.s evaluates to "solid" */
```

buttonAlignX

5.0	D		F

Controls how space is distributed from the left of the button face with respect to the icon. It is expressed as a percentage between 0 and 100, inclusive. The default value is 50.

If the icon is scaled anamorphically (which results in no space differences), this property is not used.

Type

Integer

Access

R/W

Fields

`button`

buttonAlignY

5.0	D		F

Controls how unused space is distributed from the bottom of the button face with respect to the icon. It is expressed as a percentage between 0 and 100, inclusive. The default value is 50.

If the icon is scaled anamorphically (which results in no space differences), this property is not used.

Type

Integer

Access

R/W

Fields

`button`

Example

This example is an elevator animation. The field "myElevator" is a button form field that has small width and large height. An icon is imported as the appearance face.

```
function MoveIt()
{
   if ( f.buttonAlignY == 0 ) {
      f.buttonAlignY++;
      run.dir = true;
      return;
   }
   if ( f.buttonAlignY == 100 ) {
      f.buttonAlignY--;
      run.dir = false;
      return;
   }
   if (run.dir) f.buttonAlignY++;
   else f.buttonAlignY--;
}
var f = this.getField("myElevator");
f.buttonAlignY=0;
run = app.setInterval("MoveIt()", 100);
```

```
run.dir=true;
toprun = app.setTimeOut(
   "app.clearInterval(run); app.clearTimeOut(toprun)", 2*20000+100);
```

buttonFitBounds

6.0	D		F

If `true`, the extent to which the icon may be scaled is set to the bounds of the button field. The additional icon placement properties are still used to scale and position the icon within the button face.

In previous versions of Acrobat, the width of the field border was always taken into consideration when scaling an icon to fit a button face, even when no border color was specified. Setting this property to `true` when a border color has been specified for the button will cause an exception to be raised.

Type

Boolean

Access

R/W

Fields

`button`

buttonPosition

5.0	D		F

Controls how the text and the icon of the button are positioned with respect to each other within the button face. The convenience `position` object defines all of the valid alternatives.

Icon/text placement	Keyword
Text Only	`position.textOnly`
Icon Only	`position.iconOnly`
Icon top, Text bottom	`position.iconTextV`
Text top, Icon bottom	`position.textIconV`
Icon left, Text right	`position.iconTextH`
Text left, Icon right	`position.textIconH`
Text in Icon (overlaid)	`position.overlay`

Type

Integer

Access

R/W

Fields

`button`

buttonScaleHow

5.0	D		F

Controls how the icon is scaled (if necessary) to fit inside the button face. The convenience `scaleHow` object defines all of the valid alternatives:

How is icon scaled	Keyword
Proportionally	`scaleHow.proportional`
Non-proportionally	`scaleHow.anamorphic`

Type

Integer

Access

R/W

Fields

`button`

buttonScaleWhen

5.0	D		F

Controls when an icon is scaled to fit inside the button face. The convenience `scaleWhen` object defines all of the valid alternatives:

When is icon scaled	Keyword
Always	`scaleWhen.always`
Never	`scaleWhen.never`

When is icon scaled	Keyword
If icon is too big	`scaleWhen.tooBig`
If icon is too small	`scaleWhen.tooSmall`

Type

Integer

Access

R/W

Fields

`button`

calcOrderIndex

3.01	D		F

Changes the calculation order of fields in the document. When a computable `text` or combo box field is added to a document, the field's name is appended to the calculation order array. The calculation order array determines in what order the fields are calculated. The `calcOrderIndex` property works similarly to the Calculate tab used by the Acrobat Form tool.

Type

Integer

Access

R/W

Fields

`combobox, text`

Example

```
var a = this.getField("newItem");
var b = this.getField("oldItem");
a.calcOrderIndex = b.calcOrderIndex + 1;
```

In this example, the "newItem" field was added after the "oldItem" field. The script changes the `calcOrderIndex` property of the "newItem" field so that it is calculated before the "oldItem" field.

charLimit

3.01	D		F

Limits the number of characters that a user can type into a text field.

See `event.fieldFull` to detect when the maximum number of characters is reached.

Type

Integer

Access

R/W

Fields

`text`

Example

Set a limit on the number of characters that can be typed into a field.

```
var f = this.getField("myText");
f.charLimit = 20;
```

comb

6.0	D		F

If set to `true`, the field background is drawn as series of boxes (one for each character in the value of the field) and each character of the content is drawn within those boxes. The number of boxes drawn is determined from the `charLimit` property.

It applies only to text fields. The setter will also raise if any of the following field properties are also set `multiline`, `password`, and `fileSelect`. A side-effect of setting this property is that the `doNotScroll` property is also set.

Type

Boolean

Access

R/W

Fields

`text`

Example

Create a comb field in the upper left corner of a newly created document.

```
var myDoc = app.newDoc();                  // Create a blank doc
var Bbox = myDoc.getPageBox("Crop");       // Get crop box
var inch = 72;

// Add a text field at the top of the document
var f = myDoc.addField("Name.Last", "text", 0,
   [ inch, Bbox[1]-inch, 3*inch, Bbox[1]- inch - 14 ] );
// Add some attributes to this text field
f.strokeColor = color.black;
f.textColor = color.blue;
f.fillColor = ["RGB",1,0.66,0.75];

f.comb = true;                             // Declare this is a comb field
f.charLimit = 10;                          // Max number of characters
```

commitOnSelChange

6.0	D		F

Controls whether a field value is committed after a selection change:

- If `true`, the field value is committed immediately when the selection is made.
- If `false`, the user can change the selection multiple times without committing the field value. The value is committed only when the field loses focus, that is, when the user clicks outside the field.

Type

Boolean

Access

R/W

Fields

`combobox, listbox`

currentValueIndices

5.0	D		F

Reads and writes single or multiple values of a list box or combo box.

Read

Returns the options-array indices of the strings that are the value of a list box or combo box field. These indices are 0-based. If the value of the field is a single string, it returns an integer. Otherwise, it returns an array of integers sorted in ascending order. If the current value of the field is not a member of the set of offered choices (as could happen in the case of an editable combo box) it returns -1.

Write

Sets the value of a list box or combo box. It accepts a single integer or array of integers as an argument. To set a single string as the value, pass an integer that is the 0-based index of that string in the options array. Note that in the case of an editable combo box, if the desired value is not a member of the set of offered choices, you must set the `value` instead. Except for this case, `currentValueIndices` is the preferred way to set the value of a list box or combo box.

To set a multiple selection for a list box that allows it, pass an array as argument to this property, containing the indices (sorted in ascending order) of those strings in the options array. This is the only way to invoke multiple selections for a list box from JavaScript. The ability for a list box to support multiple selections can be set through `multipleSelection`.

Related methods and properties include `numItems`, `getItemAt`, `insertItemAt`, `deleteItemAt` and `setItems`.

Type

Integer | Array

Access

R/W

Fields

`combobox, listbox`

Example (Read)

A mouse-up action of a button. The script gets the current value of a list box.

```
var f = this.getField("myList");
var a = f.currentValueIndices;
if (typeof a == "number") // A single selection
   console.println("Selection: " + f.getItemAt(a, false));
else {       // Multiple selections
   console.println("Selection:");
   for (var i = 0; i < a.length; i ++)
      console.println("   " + f.getItemAt(a[i], false));
}
```

Example (Write)

The following code, selects the second and fourth (0-based index values, 1 and 3, respectively) in a list box.

```
var f = this.getField("myList");
f.currentValueIndices = [1,3];
```

defaultStyle

6.0	D		F

This property defines the default style attributes for the form field. If the user clicks an empty field and begins entering text without changing properties using the property toolbar, these are the properties that will be used. This property is a single `Span` object without a `text` property. Some of the properties in the default style span mirror the properties of the Field object. Changing these properties also modifies the `defaultStyle` property for the field and vice versa.

The following table details the properties of the Field object that are also in the default style and any differences between their values.

Field properties	defaultStyle (Span properties)	Description
`alignment`	`alignment`	The `alignment` property has the same values for both the default style and the Field object.

`textFont`	`fontFamily`
	`fontStyle`
	`fontWeight`
		The value of this field property is a complete font name that represents the font family, weight, and style. In the default style property, each property is represented separately. If an exact match for the font properties specified in the default style cannot be found, a similar font will be used or synthesized.

`textColor`	`textColor`	The `textColor` property has the same values for both the default style and the Field object.
`textSize`	`textSize`	The `textSize` property has the same values for both the default style and the Field object.

Note: When a field is empty, `defaultStyle` is the style used for newly entered text. If a field already contains text when `defaultStyle` is changed, the text will not pick up any changes to `defaultStyle`. Newly entered text uses the attributes of the text it is inserted into (or specified with the toolbar).

When pasting rich text into a field, unspecified attributes in the pasted rich text are filled with those from `defaultStyle`.

Superscript and Subscript are ignored in `defaultStyle`.

Type

`Span` object

Access

R/W

Fields

`rich text`

Example

Change the default style for a text field.

```
var style = this.getField("Text1").defaultStyle;
style.textColor = color.red;
style.textSize = 18;

// if Courier Std is not found, use a monospace font
style.fontFamily = ["Courier Std", "monospace" ];

this.getField("Text1").defaultStyle = style;
```

defaultValue

3.01	D		F

The default value of a field—that is, the value that the field is set to when the form is reset. For combo boxes and list boxes, either an export or a user value can be used to set the default. A conflict can occur, for example, when the field has an export value and a user value with the same value but these apply to different items in the list. In such cases, the export value is matched against first.

Type

String

Access

R/W

Fields

all except `button`, `signature`

Example

```
var f = this.getField("Name");
f.defaultValue = "Enter your name here.";
```

doNotScroll

5.0	D		F

If `true`, the text field does not scroll and the user, therefore, is limited by the rectangular region designed for the field. Setting this property to `true` or `false` corresponds to checking or unchecking the Scroll Long Text field in the Options tab of the field.

Type

Boolean

Access

R/W

Fields

`text`

doNotSpellCheck

5.0	D		F

If `true`, spell checking is not performed on this editable text field. Setting this property to `true` or `false` corresponds to unchecking or checking the Check Spelling attribute in the Options tab of the Field Properties dialog box.

Type

Boolean

Access

R/W

Fields

`combobox` (editable), `text`

delay

3.01			F

Delays the redrawing of a field's appearance. It is generally used to buffer a series of changes to the properties of the field before requesting that the field regenerate its appearance. Setting the property to `true` forces the field to wait until `delay` is set to `false`. The update of its appearance then takes place, redrawing the field with its latest settings.

There is a corresponding Doc `delay` flag if changes are being made to many fields at once.

Type

Boolean

Access

R/W

Fields

all

Example

Change the appearance of a check box. Set `delay` to `true`, makes changes, and sets `delay` to `false`.

```
// Get the myCheckBox field
var f = this.getField("myCheckBox");
// Set the delay and change the fields properties
// to beveled edge and medium thickness line.
f.delay = true;
f.borderStyle = border.b;
...                        // A number of other changes
f.strokeWidth = 2;
f.delay = false; // Force the changes now
```

display

4.0	D		F

Controls whether the field is hidden or visible on screen and in print. Values are:

Effect	Keyword
Field is visible on screen and in print	`display.visible`
Field is hidden on screen and in print	`display.hidden`
Field is visible on screen but does not print	`display.noPrint`
Field is hidden on screen but prints	`display.noView`

This property supersedes the older `hidden` and `print` properties.

Type

Integer

Access

R/W

Fields

all

Example

```
// Set the display property
var f = getField("myField");
f.display = display.noPrint;

// Test whether field is hidden on screen and in print
if (f.display == display.hidden) console.println("hidden");
```

doc

3.01			

Returns the Doc of the document to which the field belongs.

Type

object

Access

R

Fields

all

editable

3.01	D		F

Controls whether a combo box is editable. If `true`, the user can type in a selection. If `false`, the user must choose one of the provided selections.

Type

Boolean

Access

R/W

Fields

`combobox`

Example

```
var f = this.getField("myComboBox");
f.editable = true;
```

exportValues

5.0	D		F

An array of strings representing the export values for the field. The array has as many elements as there are annotations in the field. The elements are mapped to the annotations in the order of creation (unaffected by tab-order).

For radio button fields, this property is required to make the field work properly as a group. The button that is checked at any time gives its value to the field as a whole.

For check box fields, unless an export value is specified, "Yes" (or the corresponding localized string) is the default when the field is checked. "Off" is the default when the field is unchecked (the same as for a radio button field when none of its buttons are checked).

Type

Array

Access

R/W

Fields

`checkbox, radiobutton`

Example

Create a radio button field and sets its export values.

```
var d = 40;
var f = this.addField("myRadio","radiobutton",0, [200, 510, 210, 500]);
this.addField("myRadio","radiobutton",0, [200+d, 510-d, 210+d, 500-d]);
this.addField("myRadio","radiobutton",0,[200, 510-2*d, 210, 500-2*d]);
this.addField("myRadio","radiobutton",0,[200-d, 510-d, 210-d, 500-d]);
f.strokeColor = color.black;
// Now give each radio field an export value
f.exportValues = ["North", "East", "South", "West"];
```

fileSelect

5.0	D	S	F

If `true`, sets the file-select flag in the Options tab of the text field (Field is Used for File Selection). This indicates that the value of the field represents a path of a file whose contents may be submitted with the form.

The path may be entered directly into the field by the user, or the user can browse for the file. (See the `browseForFileToSubmit` method.)

Note: The file select flag is mutually exclusive with the `multiline`, `charLimit`, `password`, and `defaultValue` properties. Also, on the Mac OS platform, when setting the file select flag, the field gets treated as read-only. Therefore, the user must browse for the file to enter into the field. (See `browseForFileToSubmit`.)

This property can only be set during a batch or console event. See "Privileged versus non-privileged context" on page 32 for details. The `event` object contains a discussion of JavaScript events.

Type

Boolean

Access

R/W

Fields

`text`

fillColor

4.0	D		F

Specifies the background color for a field. The background color is used to fill the rectangle of the field. Values are defined by using `transparent`, `gray`, `RGB` or `CMYK` color. See "Color arrays" on page 193 for information on defining color arrays and how values are used with this property.

In older versions of this specification, this property was named `bgColor`. The use of `bgColor` is now discouraged, although it is still valid for backward compatibility.

Type

Array

Access

R/W

Fields

all

Example

Change the background color of a text field. If the current color is red, it changes to blue, otherwise it changes to yellow.

```
var f = this.getField("myField");
if (color.equal(f.fillColor, color.red))
   f.fillColor = color.blue;
else
   f.fillColor = color.yellow;
```

hidden

X	D		F

Note: This property has been superseded by the `display` property and its use is discouraged.

If the value is `false`, the field is visible to the user; if `true`, the field is invisible. The default value is `false`.

Type

Boolean

Access

R/W

Fields

all

highlight

3.01	D		F

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

`none` — No visual indication that the button has been clicked.

`invert` — The region encompassing the button's rectangle inverts momentarily.

`push` — The down face for the button (if any) is displayed momentarily.

`outline` — The border of the rectangleinverts momentarily.

The convenience `highlight` object defines each state, as follows:

Type	Keyword
`none`	`highlight.n`
`invert`	`highlight.i`
`push`	`highlight.p`
`outline`	`highlight.o`

Type

String

Access

R/W

Fields

`button`

Example

Set the highlight property of a button to "invert".

```
var f = this.getField("myButton");
f.highlight = highlight.i;
```

lineWidth

4.0	D		F

Specifies the thickness of the border when stroking the perimeter of a field's rectangle. If the stroke color is transparent, this parameter has no effect except in the case of a beveled border. Values are:

`0` — none

`1` — thin

`2` — medium

`3` — thick

In older versions of this specification, this property was `borderWidth`. The use of `borderWidth` is now discouraged, although it is still valid for backward compatibility.

The default value for `lineWidth` is 1 (thin). Any integer value can be used; however, values beyond 5 may distort the field's appearance.

Type

Integer

Access

R/W

Fields

all

Example

Change the border width of the Text Box to medium thickness

```
f.lineWidth = 2
```

multiline

3.01	D		F

Controls how text is wrapped within the field. If `false` (the default), the text field can be a single line only. If `true`, multiple lines are allowed and they wrap to field boundaries.

Type

Boolean

Access

R/W

Fields

`text`

Example

See Example 1 following the Doc `getField` method.

multipleSelection

5.0	D		F

If `true`, indicates that a list box allows a multiple selection of items.

See also `type`, `value`, and `currentValueIndices`.

Type

Boolean

Access

R/W

Fields

`listbox`

name

3.01			

This property returns the fully qualified field name of the field as a string object.

Beginning with Acrobat 6.0, if the Field object represents one individual widget, the returned name includes an appended '.' followed by the widget index.

Type

String

Access

R

Fields

`all`

Example

Get a Field object and write the `name` of the field to the console.

```
var f = this.getField("myField");

// Displays "myField" in the console window
console.println(f.name);
```

numItems

3.01			

The number of items in a combo box or list box.

Type

Integer

Access

R

Fields

`combobox, listbox`

Example

Get the number of items in a list box.

```
var f = this.getField("myList");
console.println("There are " + f.numItems + " in this list box");
```

Face names and values of a combo box or list box can be accessed through the getItemAt method. See that method for an additional example of numItems.

page

5.0			

The page number or an array of page numbers of a field. If the field has only one appearance in the document, the page property returns an integer representing the 0-based page number of the page on which the field appears. If the field has multiple appearances, it returns an array of integers, each member of which is a 0-based page number of an appearance of the field. The order in which the page numbers appear in the array is determined by the order in which the individual widgets of this field were created (and is unaffected by tab-order). If an appearance of the field is on a hidden template page, page returns a value of -1 for that appearance.

Type

Integer | Array

Access

R

Fields

all

Example 1

Determine whether a particular field appears on one page, or more than one page.

```
var f = this.getField("myField");
if (typeof f.page == "number")
   console.println("This field only occurs once on page " + f.page);
else
   console.println("This field occurs " + f.page.length + " times);
```

Example 2 (Acrobat 6.0)

The page property can be used to get the number of widgets associated with a field name. This example gets the number of radio buttons in a radio button field.

```
var f = this.getField("myRadio");
if ( typeof f.page == "object" )
   console.println("There are " + f.page.length
      + " radios in this field.");
```

password

3.01	D		F

Specifies whether the field should display asterisks when data is entered in the field. (Upon submission, the actual data entered is sent.) If this property is `true`, data in the field is not saved when the document is saved to disk.

Type

Boolean

Access

R/W

Fields

`text`

print

X	D		F

Note: This property has been superseded by the `display` property and its use is discouraged.

If `true`, the field appears when the user prints the document. If `false`, the field does not appear when printing. This property can be used to hide control buttons and other fields that are not useful on the printed page.

Type

Boolean

Access

R/W

Fields

all

radiosInUnison

6.0	D		F

If `false`, even if a group of radio buttons have the same name and export value, they behave in a mutually exclusive fashion, like HTML radio buttons. The default for new radio buttons is `false`.

If `true`, if a group of radio buttons have the same name and export value, they turn on and off in unison, as in Acrobat 4.0.

Type

Boolean

Access

R/W

Fields

`radiobutton`

readonly

3.01	D		F

The read-only characteristic of a field. If a field is read-only, the user can see the field but cannot change it.

Type

Boolean

Access

R/W

Fields

all

Example

Get a field and make it read-only.

```
var f = this.getField("myTextField");
f.value = "You can't change this message!";
f.readonly = true;
```

rect

5.0	D		F

An array of four numbers in rotated user space that specify the size and placement of the form field. These four numbers are the coordinates of the bounding rectangle and are listed in the following order: upper-left *x*, upper-left *y*, lower-right *x* and lower-right *y*.

Note: The `Annotation` object also has a `rect` property. However, the coordinates are not in rotated user space and they are in a different order than in the Field object `rect` property.

Type

Array

Access

R/W

Fields

all

Example 1

Lay out a 2-inch-wide text field just to the right of the field "myText".

```
var f = this.getField("myText"); // Get the Field object
var myRect = f.rect;  // and get its rectangle
myRect[0] = f.rect[2]; // The ulx for new = lrx for old
myRect[2] += 2 * 72;   // Move two inches for lry
f = this.addField("myNextText", "text", this.pageNum, myRect);
f.strokeColor = color.black;
```

Example 2

Move an existing button field 10 points to the right.

```
var b = this.getField("myButton");
var aRect = b.rect; // Make a copy of b.rect
aRect[0] += 10;  // Increment first x coordinate by 10
aRect[2] += 10;  // Increment second x coordinate by 10
b.rect = aRect;  // Update the value of b.rect
```

required

3.01	D		F

Specifies whether a field requires a value. If `true`, the field's value must be non-`null` when the user clicks a submit button that causes the value of the field to be posted. If the field value is `null`, the user receives a warning message and the submit does not occur.

Type

Boolean

Access

R/W

Fields

all except `button`

Example

Make “myField” into a required field.

```
var f = this.getField("myField");
f.required = true;
```

richText

6.0	D		F

If `true`, the field allows rich text formatting. The default is `false`.

Type

Boolean

Access

R/W

Fields

`text`

Related objects and properties are `richValue`, `defaultStyle`, `event.richValue`, `event.richChange`, `event.richChangeEx`, the `Annotation` object `richContents` property, and the `Span` object.

Example 1

Get a Field object and set it for rich text formatting.

```
var f = this.getField("Text1");
f.richText = true;
```

See Example 2 following `richValue` for a more complete example.

Example 2

Count the number of rich text fields in the document.

```
var count = 0;
for ( var i = 0; i < this.numFields; i++)
{
   var fname = this.getNthFieldName(i);
   var f = this.getField(fname);
   if ( f.type == "text" && f.richText ) count++
}
console.println("There are a total of "+ count + " rich text fields.");
```

richValue

6.0	D		F

This property specifies the text contents and formatting of a rich text field. For field types other than rich text, this property is `undefined`. The rich text contents are represented as an array of `Span` objects containing the text contents and formatting of the field.

Type

Array of `Span` objects

Access

R/W

Fields

rich text

Related objects and properties are `richText`, `defaultStyle`, `event.richValue`, `event.richChange`, `event.richChangeEx`, the `Annotation` object `richContents` property, and the `Span` object.

Example 1

Turn all bold text into red underlined text.

```
var f = this.getField("Text1");
var spans = f.richValue;
for ( var i = 0; i < spans.length; i++ )
{
   if( spans[i].fontWeight >= 700 )
   {
      spans[i].textColor = color.red;
      spans[i].underline = true;
   }
}
f.richValue = spans;
```

Example 2

Create a text field, marks it for rich text formatting, and inserts rich text.

```
var myDoc = app.newDoc();                    // Create a blank doc
var Bbox = myDoc.getPageBox("Crop");         // Get crop box
var inch = 72;

// Add a text field at the top of the document
var f = myDoc.addField("Text1", "text", 0,
   [72, Bbox[1]-inch, Bbox[2]-inch, Bbox[1]-2*inch ] );
// Add some attributes to this text field
f.strokeColor = color.black;
```

```
f.richText = true;                          // Rich text
f.multiline = true;                         // Multiline

// Now build up an array of Span objects
var spans = new Array();
spans[0] = new Object();
spans[0].text = "Attention:\r";
spans[0].textColor = color.blue;
spans[0].textSize = 18;

spans[1] = new Object();
spans[1].text = "Adobe Acrobat 6.0\r";
spans[1].textColor = color.red;
spans[1].textSize = 20;
spans[1].alignment = "center";

spans[2] = new Object();
spans[2].text = "will soon be here!";
spans[2].textColor = color.green;
spans[2].fontStyle = "italic";
spans[2].underline = true;
spans[2].alignment = "right";

// Now give the rich field a rich value
f.richValue = spans;
```

rotation

6.0	D		X

The rotation of a widget in counterclockwise increments. Valid values are 0, 90, 180, and 270.

Type

Integer

Access

R/W

Fields

all

Example

Create a rotated text field on each page and fill it with text.

```
for ( var i=0; i < this.numPages; i++) {
   var f = this.addField("myRotatedText"+i,"text",i,[6, 6+72, 18, 6]);
   f.rotation = 90; f.value = "Confidential";
   f.textColor = color.red; f.readonly = true;
}
```

strokeColor

4.0	D		F

Specifies the stroke color for a field that is used to stroke the rectangle of the field with a line as large as the line width. Values are defined by using `transparent`, `gray`, `RGB` or `CMYK` color. See "Color arrays" on page 193 for information on defining color arrays and how values are used with this property.

In older versions of this specification, this property was `borderColor`. The use of `borderColor` is now discouraged, although it is still valid for backward compatibility.

Type

Array

Access

R/W

Fields

all

Example

Change the stroke color of each text field in the document to red.

```
for ( var i=0; i < this.numFields; i++) {
   var fname = this.getNthFieldName(i);
   var f = this.getField(fname);
   if ( f.type == "text" ) f.strokeColor = color.red;
}
```

style

3.01	D		F

Allows the user to set the glyph style of a check box or radio button. The glyph style is the graphic used to indicate that the item has been selected.

The style values are associated with keywords as follows.

Style	Keyword
check	`style.ch`
cross	`style.cr`
diamond	`style.di`

Style	Keyword
circle	`style.ci`
star	`style.st`
square	`style.sq`

Type

String

Access

R/W

Fields

`checkbox, radiobutton`

Example

This example sets the glyph style to circle.

```
var f = this.getField("myCheckbox");
f.style = style.ci;
```

submitName

5.0	D		F

If nonempty, used during form submission instead of `name`. Only applicable if submitting in HTML format (that is, URL-encoded).

Type

String

Access

R/W

Fields

`all`

textColor

4.0	D		F

The foreground color of a field. It represents the text color for text, button, or list box fields and the check color for check box or radio button fields. Values are defined the same as the `fillColor`. See "Color arrays" on page 193 for information on defining color arrays and how values are set and used with this property.

In older versions of this specification, this property was `fgColor`. The use of `fgColor` is now discouraged, although it is still valid for backward compatibility.

Note: An exception is thrown if a transparent color space is used to set `textColor`.

Type

Array

Access

R/W

Fields

all

Example

This example sets the foreground color to red.

```
var f = this.getField("myField");
f.textColor = color.red;
```

textFont

3.01	D		F

The font that is used when laying out text in a text field, combo box, list box or button. Valid fonts are defined as properties of the `font` object. Beginning with Acrobat 5.0, arbitrary fonts can also be used. See """Use of arbitrary fonts" on page 445".

Type

String

Access

R/W

Fields

`button, combobox, listbox, text`

font Object

Text font	Keyword
Times-Roman	`font.Times`
Times-Bold	`font.TimesB`
Times-Italic	`font.TimesI`
Times-BoldItalic	`font.TimesBI`
Helvetica	`font.Helv`
Helvetica-Bold	`font.HelvB`
Helvetica-Oblique	`font.HelvI`
Helvetica-BoldOblique	`font.HelvBI`
Courier	`font.Cour`
Courier-Bold	`font.CourB`
Courier-Oblique	`font.CourI`
Courier-BoldOblique	`font.CourBI`
Symbol	`font.Symbol`
ZapfDingbats	`font.ZapfD`

Use of arbitrary fonts

Beginning with Acrobat 5.0, an arbitrary font can be used when laying out a text field, combo box, list box or button by setting the value of `textFont` to the PDSysFont font name, as returned by PDSysFontGetName. (See the *Acrobat and PDF Library API Reference*.)

➤ **To find the PDSysFont font name of a font:**

1. Create a text field in a PDF document. Using the UI, set the text font for this field to the desired font.
2. Open the JavaScript Debugger Console and execute the script

   ```
   this.getField("Text1").textFont
   ```

   The above code assumes the name of the field is `Text1`.
3. The string returned to the console is the font name needed to programmatically set the text font.

Example

Set the font to Helvetica.

```
var f = this.getField("myField");
f.textFont = font.Helv;
```

Example (Acrobat 5.0)

Set the font of myField to Viva-Regular.

```
var f = this.getField("myField");
f.textFont = "Viva-Regular";
```

textSize

3.01	D		F

Specifies the text size (in points) to be used in all controls. In check box and radio button fields, the text size determines the size of the check. Valid text sizes range from 0 to 32767, inclusive. A value of zero means the largest point size that allows all text data to fit in the field's rectangle.

Type

Number

Access

R/W

Fields

all

Example

Set the text size of "myField" to 28 points.

```
this.getField("myField").textSize = 28;
```

type

3.01			

Returns the type of the field as a string. Valid types are:

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

Type

String

Access

R

Fields

all

Example

Count the number of text fields in the document.

```
var count = 0;
for ( var i=0; i<this.numFields; i++) {
   var fname = this.getNthFieldName(i);
   if ( this.getField(fname).type == "text" ) count++; }
console.println("There are " + count + " text fields.");
```

userName

3.01	D		F

The user name (short description string) of the field. It is intended to be used as tooltip text whenever the cursor enters a field. It can also be used as a user-friendly name, instead of the field name, when generating error messages.

Type

String

Access

R/W

Fields

all

Example

Add a tooltip to a button field.

```
var f = this.getField("mySubmit");
f.userName = "Press this button to submit your data.";
```

value

3.01	D		F

The value of the field data that the user has entered. Depending on the `type` of the field, may be a String, Date, or Number. Typically, the `value` is used to create calculated fields.

Beginning with Acrobat 6.0, if a field contains rich text formatting, modifying this property will discard the formatting and regenerate the field value and appearance using the `defaultStyle` and plain text value. To modify the field value and maintain formatting use the `richValue` property.

Note: For signature fields, if the field has been signed, a non-`null` string is returned as the value.

For Acrobat 5.0 or later, if the field is a list box that accepts multiple selections (see `multipleSelection`), you can pass an array to set the `value` of the field, and `value` returns an array for a list box with multiple values currently selected.

The `currentValueIndices` of a list box that has multiple selections is the preferred and most efficient way to get and set the value of this type of field.

See also `valueAsString` and `event.type`.

Type

various

Access

R/W

Fields

all except `button`

Example

In this example, the `value` of the field being calculated is set to the sum of the "Oil" and "Filter" fields and multiplied by the state sales tax.

```
var oil = this.getField("Oil");
var filter = this.getField("Filter");
event.value = (oil.value + filter.value) * 1.0825;
```

valueAsString

5.0	D		

Returns the value of a field as a JavaScript string.

It differs from `value`, which attempts to convert the contents of a field contents to an accepted format. For example, for a field with a value of "020", `value` returns the integer 20, while `valueAsString` returns the string "020".

Type

String

Access

R

Fields

all except `button`

Field methods

browseForFileToSubmit

5.0	D		

If invoked on a text field for which the `fileSelect` flag is set (checked), opens a standard file-selection dialog box. The path entered through the dialog box is automatically assigned as the value of the text field.

If invoked on a text field in which the `fileSelect` flag is clear (unchecked), an exception is thrown.

Example

The following code references a text field with the file select flag checked. It is a mouse-up action of a button field.

```
var f = this.getField("resumeField");
f.browseForFileToSubmit();
```

buttonGetCaption

5.0			

Gets the caption associated with a button.

Use `buttonSetCaption` to set the caption.

Parameters

`nFace`	(optional) If specified, gets a caption of the given type: `0` — (default) normal caption `1` — down caption `2` — rollover caption

Returns

The caption string associated with the button.

Example

This example places pointing arrows to the left and right of the caption on a button field with icon and text.

```
// A mouse enter event
event.target.buttonSetCaption("=> "+ event.target.buttonGetCaption()
   +" <=");

// A mouse exit event
var str = event.target.buttonGetCaption();
str = str.replace(/=> | <=/g, "");
event.target.buttonSetCaption(str);
```

The same effect can be created by having the same icon for rollover and the same text, with the arrows inserted, for the rollover caption. This approach would be slower and cause the icon to flicker. The above code gives a very fast and smooth rollover effect because only the caption is changed, not the icon.

buttonGetIcon

5.0			

Gets the `Icon` object of a specified type associated with a button.

See also the `buttonSetIcon` method for assigning an icon to a button.

Parameters

`nFace`	(optional) If specified, gets an icon of the given type: `0` — (default) normal icon `1` — down icon `2` — rollover icon

Returns

The `Icon` object.

Example

```
// Swap two button icons.
var f = this.getField("Button1");
var g = this.getField("Button2");
var temp = f.buttonGetIcon();
f.buttonSetIcon(g.buttonGetIcon());
g.buttonSetIcon(temp);
```

See also `buttonSetIcon` and `buttonImportIcon`.

buttonImportIcon

3.01		S	X

Imports the appearance of a button from another PDF file. If neither optional parameter is passed, the user is prompted to select a file.

See also `buttonGetIcon`, `buttonSetIcon`, `addIcon`, `getIcon`, `importIcon`, and `removeIcon`.

Note: (Acrobat 8.0) If `cPath` is specified, this method can only be executed during batch and console events. See "Privileged versus non-privileged context" on page 32 for details. The `event` object contains a discussion of JavaScript events.

Parameters

`cPath`	(optional, Acrobat 5.0) The device-independent path for the file. Beginning with Acrobat 6.0, Acrobat first attempts to open `cPath` as a PDF file. On failure, Acrobat tries to convert the file to PDF from one of the known graphics formats (BMP, GIF, JPEG, PCX, PNG, TIFF) and then import the converted file as a button icon.
`nPage`	(optional, Acrobat 5.0) The 0-based page number from the file to turn into an icon. The default is 0.

Returns

An integer, as follows:

`1` — The user cancelled the dialog

`0` — No error

`-1` — The selected file could not be opened

`-2` — The selected page was invalid

Example (Acrobat 5.0)

It is assumed that we are connected to an employee information database. We communicate with the database using the `ADBC` object and related objects. An employee's record is requested and three columns are utilized, *FirstName*, *SecondName*, and *Picture*. The *Picture* column, from the database, contains a device-independent path to the employee's picture, stored in PDF format. The script might look like this:

```
var f = this.getField("myPicture");
f.buttonSetCaption(row.FirstName.value + " " + row.LastName.value);
if (f.buttonImportIcon(row.Picture.value) != 0)
   f.buttonImportIcon("/F/employee/pdfs/NoPicture.pdf");
```

The button field "myPicture" has been set to display both icon and caption. The employee's first and last names are concatenated to form the caption for the picture. Note that if there is an error in retrieving the icon, a substitute icon can be imported.

buttonSetCaption

5.0	D		

Sets the caption associated with a button.

Use `buttonGetCaption` to get the current caption.

See `buttonAlignX`, `buttonAlignY`, `buttonFitBounds`, `buttonPosition`, `buttonScaleHow`, and `buttonScaleWhen` for details on how the icon and caption are placed on the button face.

Parameters

`cCaption`	The caption associated with the button.
`nFace`	(optional) If specified, sets a caption of the given type: `0` — (default) normal caption `1` — down caption `2` — rollover caption

Example

```
var f = this.getField("myButton");
f.buttonSetCaption("Hello");
```

buttonSetIcon

5.0	D		

Sets the icon associated with a button.

See `buttonAlignX`, `buttonAlignY`, `buttonFitBounds`, `buttonPosition`, `buttonScaleHow`, and `buttonScaleWhen` for details on how the icon and caption are placed on the button face.

Use either `buttonGetIcon` or `doc.getIcon` to get an `Icon` object that can be used for the `oIcon` parameter of this method.

Note: This method must be executed from script embedded within the document. Executing script containing `buttonSetIcon` in the console of the Adobe Reader, for example, will throw a `NotAllowedError` exception.

Parameters

`oIcon`	The `Icon` object associated with the button.
`nFace`	(optional) If specified, sets an icon of the given type: `0` — (default) normal icon `1` — down icon `2` — rollover icon

Example

This example takes every named icon in the document and creates a list box using the names. Selecting an item in the list box sets the icon with that name as the button face of the field "myPictures". What follows is the mouse-up action of the button field "myButton".

```
var f = this.getField("myButton")
var aRect = f.rect;
aRect[0] = f.rect[2];              // Place list box relative to the
aRect[2] = f.rect[2] + 144;        // position of "myButton"
var myIcons = new Array();
var l = addField("myIconList", "combobox", 0, aRect);
l.textSize = 14;
l.strokeColor = color.black;
for (var i = 0; i < this.icons.length; i++)
   myIcons[i] = this.icons[i].name;
l.setItems(myIcons);
l.setAction("Keystroke",
   'if (!event.willCommit) {\r\t'
   + 'var f = this.getField("myPictures");\r\t'
   + 'var i = this.getIcon(event.change);\r\t'
   + 'f.buttonSetIcon(i);\r'
   + '}');
```

The named icons themselves can be imported into the document through an interactive scheme, such as the example given in `addIcon` or through a batch sequence.

See also `buttonGetCaption` for a more extensive example.

checkThisBox

5.0	D		F

Checks or unchecks the specified widget.

Only check boxes can be unchecked. A radio button cannot be unchecked using this method, but if its default state is unchecked (see `defaultIsChecked`) it can be reset to the unchecked state using the `resetForm`. method of the Doc.

Note: For a set of radio buttons that do not have duplicate export values, you can set the `value` to the export value of the individual widget that should be checked (or pass an empty string if none should be).

Parameters

`nWidget`	The 0-based index of an individual check box or radio button widget for this field. The index is determined by the order in which the individual widgets of this field were created (and is unaffected by tab-order). Every entry in the Fields panel has a suffix giving this index; for example, MyField #0.
`bCheckIt`	(optional) Specifies whether the widget should be checked. The default is `true`.

Example

Check a check box.

```
var f = this.getField("ChkBox");
f.checkThisBox(0,true);
```

clearItems

4.0	D		F

Clears all the values in a list box or combo box.

Related methods and properties include `numItems`, `getItemAt`, `deleteItemAt`, `currentValueIndices`, `insertItemAt` and `setItems`.

Example

Clear the field “myList” of all items.

```
this.getField("myList").clearItems();
```

defaultIsChecked

5.0	D		

Sets the specified widget to be checked or unchecked by default.

Note: For a set of radio buttons that do not have duplicate export values, you can set the `defaultValue` to the export value of the individual widget that should be checked by default (or pass an empty string if none should be checked).

Parameters

`nWidget`	The 0-based index of an individual radio button or check box widget for this field. The index is determined by the order in which the individual widgets of this field were created (and is unaffected by tab-order). Every entry in the Fields panel has a suffix giving this index (for example, MyField #0).
`bIsDefaultChecked`	(optional) If `true` (the default), the widget should be checked by default (for example, when the field gets reset). If `false`, it should be unchecked by default.

Returns

`true` on success.

Example

Change the default of "ChkBox" to checked, then reset the field to reflect the default value.

```
var f = this.getField("ChkBox");
f.defaultIsChecked(0,true);
this.resetForm(["ChkBox"]);
```

deleteItemAt

4.0	Ⓓ		Ⓕ

Deletes an item in a combo box or a list box.

For a list box, if the current selection is deleted, the field no longer has a current selection. If this method is invoked again on the same field and no parameter is specified, unexpected behavior can result because there is no current selection to delete. Therefore, it is important to make a new selection (such as by using the `currentValueIndices` method) for the method to behave as documented.

Parameters

`nIdx`	(optional) The 0-based index of the item in the list to delete. If not specified, the currently selected item is deleted.

Example

Delete the current item in the list, then select the top item in the list.

```
var a = this.getField("MyListBox");
a.deleteItemAt();              // Delete current item, and...
a.currentValueIndices = 0;     // select top item in list
```

getArray

3.01			

Gets the array of terminal child fields (that is, fields that can have a value) for this Field object, the parent field.

Returns

An array of Field objects

Example

Make a calculation of the values of the child fields of the parent field.

```
// f has 3 children: f.v1, f.v2, f.v3
var f = this.getField("f");
var a = f.getArray();
var v = 0.0;
for (j =0; j < a.length; j++) v += a[j].value;
// v contains the sum of all the children of field "f"
```

getItemAt

3.01			

Gets the internal value of an item in a combo box or a list box.

The number of items in a list can be obtained from `numItems`. See also `insertItemAt`, `deleteItemAt`, `clearItems`, `currentValueIndices` and `setItems`.

Parameters

`nIdx`	The 0-based index of the item in the list or -1 for the last item in the list.
`bExportValue`	(optional, Acrobat 5.0) Specifies whether to return an export value: • If `true` (the default), if the item has an export value, it is returned. If there is no export value, the item name is returned. • If `false`, the method returns the item name.

Returns

The export value or name of the specified item.

Example

In the two examples that follow, assume there are three items on "myList": "First", with an export value of 1; "Second", with an export value of 2; and "Third", with no export value.

```
// Returns value of first item in list, which is 1
var f = this.getField("myList");
var v = f.getItemAt(0);
```

The following example shows the use of the second optional parameter. By setting it to `false`, the item name (face value) can be obtained, even if there is an export value.

```
for (var i=0; i < f.numItems; i++)
   console.println(f.getItemAt(i,true) + ":  " + f.getItemAt(i,false));
```

The output to the console reads:

```
1:              First
2:              Second
Third:          Third
```

getLock

6.0			

Gets a `Lock` object, a generic object that contains the lock properties of a signature field.

See also `setLock`.

Returns

The `Lock` object for the field.

insertItemAt

3.01	D		F

Inserts a new item into a combo box or a list box.

Related methods and properties include `numItems`, `getItemAt`, `deleteItemAt`, `clearItems`, `currentValueIndices` and `setItems`.

Parameters

`cName`	The item name that will appear in the form.
`cExport`	(optional) The export value of the field when this item is selected. If not provided, the `cName` is used as the export value.
`nIdx`	(optional) The index in the list at which to insert the item. If 0 (the default), the new item is inserted at the top of the list. If –1, the new item is inserted at the end of the list.

Example

```
var l = this.getField("myList");
l.insertItemAt("sam", "s", 0); /* inserts sam to top of list l */
```

isBoxChecked

5.0			

Determines whether the specified widget is checked.

Note: For a set of radio buttons that do not have duplicate export values, you can get the `value`, which is equal to the export value of the individual widget that is currently checked (or returns an empty string, if none is).

Parameters

`nWidget`	The 0-based index of an individual radio button or check box widget for this field. The index is determined by the order in which the individual widgets of this field were created (and is unaffected by tab-order). Every entry in the Fields panel has a suffix giving this index, for example, MyField #0.

Returns

`true` if the specified widget is currently checked, `false` otherwise.

Example

Determine the state of the check box and report back with an alert box.

```
var f = this.getField("ChkBox");
var cbStatus = (f.isBoxChecked(0)) ? " " : " not ";
app.alert("The box is" + cbStatus + "checked");
```

isDefaultChecked

5.0			

Determines whether the specified widget is checked by default (for example, when the field gets reset).

Note: For a set of radio buttons that do not have duplicate export values, you can get the `defaultValue`, which is equal to the export value of the individual widget that is checked by default (or returns an empty string, if none is).

Parameters

`nWidget`	The 0-based index of an individual radio button or check box widget for this field. The index is determined by the order in which the individual widgets of this field were created (and is unaffected by tab-order). Every entry in the Fields panel has a suffix giving this index, for example, MyField #0.

Returns

`true` if the specified widget is checked by default, `false` otherwise.

Example

Determine if the specified check box is checked by default.

```
var f = this.getField("ChkBox");
var cbStatus = (f.isDefaultChecked(0)) ? "Checked" : "Unchecked";
app.alert("The Default: " + cbStatus);
```

setAction

5.0	D		X

Sets the JavaScript action of the field for a given trigger.

Related methods are the `Bookmark` object `setAction` method and the Doc methods `setAction`, `addScript`, and `setPageAction`.

Note: This method will overwrite any action already defined for the chosen trigger.

Parameters

`cTrigger`	A string that sets the trigger for the action. Values are:
	
	`MouseUp`
	`MouseDown`
	`MouseEnter`
	`MouseExit`
	`OnFocus`
	`OnBlur`
	`Keystroke`
	`Validate`
	`Calculate`
	`Format`
	
	For a list box, use the `Keystroke` trigger for the Selection Change event.

`cScript`	The JavaScript code to be executed when the trigger is activated.

Example

Set up a button field with `addField`, add some properties, and a mouse-up action using `setAction`.

```
var f = this.addField("actionField", "button", 0 , [20, 100, 100, 20]);
f.setAction("MouseUp", "app.beep(0);");
f.delay = true;
   f.fillColor = color.ltGray;
   f.buttonSetCaption("Beep");
   f.borderStyle = border.b;
   f.lineWidth = 3;
   f.strokeColor = color.red;
   f.highlight = highlight.p;
f.delay = false;
```

setFocus

4.05			

Sets the keyboard focus to this field. This can involve changing the page that the user is currently on or causing the view to scroll to a new position in the document. This method brings the document in which the field resides to the front, if it is not already there.

See also `bringToFront`.

Example

Search for a certain open document, then focus on the field of interest. This script uses `app.activeDocs`, which requires the `disclosed` property of the documents to be `true`, or the script to be run during console, batch or menu events.

```
var d = app.activeDocs;
for (var i = 0; i < d.length; i++) {
   if (d[i].info.Title == "Response Document") {
      d[i].getField("name").value="Enter your name here: "
      // also brings the doc to front.
      d[i].getField("name").setFocus();
      break;
   }
}
```

setItems

4.0	D		F

Sets the list of items for a combo box or a list box.

Related methods and properties include `numItems`, `getItemAt`, `deleteItemAt`, `currentValueIndices` and `clearItems`.

Parameters

`oArray`	An array in which each element is either an object convertible to a string or another array: • For an element that can be converted to a string, the user and export values for the list item are equal to the string. • For an element that is an array, the array must have two subelements convertible to strings, where the first is the user value and the second is the export value.

Examples

Get various fields (combo or list) and set items in the list using various techniques.

```
var l = this.getField("ListBox");
l.setItems(["One", "Two", "Three"]);

var c = this.getField("StateBox");
c.setItems([["California", "CA"],["Massachusetts", "MA"],
   ["Arizona", "AZ"]]);

var c = this.getField("NumberBox");
c.setItems(["1", 2, 3, ["PI", Math.PI]]);
```

setLock

6.0	D	S	X

Controls which fields are to be locked when a signature is applied to this signature field. No modifications can be made to locked fields. If the signature is cleared, all fields that were locked become unlocked. The property settings can be obtained using `getLock`.

Note: The method can be executed during a batch, application initialization, or console event. See "Privileged versus non-privileged context" on page 32 for details.

This method cannot be applied to a field that is in a document that is already signed.

Parameters

`oLock`	A `Lock` object containing the lock properties.

Returns

`true` if successful, otherwise `false` or throws an exception.

Lock Object

A generic JavaScript object containing lock properties. This object is passed to `setLock` and returned by `getLock` for a signature field. It contains the following properties.

Property	Type	Access	Description
`action`	String	R/W	The language-independent name of the action. Values are: **`All`** — All fields in the document are to be locked. **`Include`** — Only the fields specified in fields are to be locked. **`Exclude`** — All fields except those specified in fields are to be locked.
`fields`	Array of Strings	R/W	An array of strings containing the field names. Required if the value of action is `Include` or `Exclude`.

signatureGetModifications

7.0			

Returns an object containing information on modifications that have been made to the document after the signature field was signed. The information includes only the difference between the current and signed state of the document. Transient objects, such as objects added after the signature but then subsequently deleted, are not reported.

Returns

An object containing modification information. The object has the following properties:

Property	Type	Description
`formFieldsCreated`	Array of Field objects	Array of form fields created after signing.
`formFieldsDeleted`	Array of Generic objects	Array of form fields deleted after signing. Each generic object in the array is a string of the form `name : type`.
`formFieldsFilledIn`	Array of Field objects	Array of form fields filled in after signing.
`formFieldsModified`	Array of Field objects	Array of form fields modified after signing. In this context, form field fill-in does not constitute modification.
`annotsCreated`	Array of `Annotation` objects	Array of annotations created after signing. If the annotation is transient (for example, a dynamically created pop-up), the corresponding element of the array is a string of the form `author : name : type`.

Property	Type	Description
annotsDeleted	Array of Generic objects	Array of annotations deleted after signing. Each generic object in the array is of the form `author : name : type`.
annotsModified	Array of `Annotation` objects	Array of annotations modified after signing. If the annotation is transient (for example, a dynamically created pop-up), the corresponding element of the array is a string of the form `author : name : type`.
numPagesCreated	Integer	Number of pages added after signing.
numPagesDeleted	Integer	Number of pages deleted after signing.
numPagesModified	Integer	Number of pages whose content has been modified after signing (add/delete/modify of annotations/form fields are not considered as page modification for this purpose).
spawnedPagesCreated	Array of Strings	List of pages spawned after signing. For each spawned page, the name of the source template is provided.
spawnedPagesDeleted	Array of Strings	List of spawned pages deleted after signing. For each spawned page, the name of the source template is provided.
spawnedPagesModified	Array of Strings	List of spawned pages modified after signing. For each spawned page, the name of the source template is provided.

Example

Write modification information back to the console.

```
var sigField = this.getField( "mySignature" );
var sigMods = sigField.signatureGetModifications();

var formFieldsCreated = sigMods.formFieldsCreated;
for( var i = 0; i < formFieldsCreated.length; i++ )
   console.println( formFieldsCreated[i].name );

var formFieldsDeleted = sigMods.formFieldsDeleted;
for( var i = 0; i < formFieldsDeleted.length; i++ )
   console.println( formFieldsDeleted[i].name );

var formFieldsFilledIn = sigMods.formFieldsFilledIn;
for( var i = 0; i < formFieldsFilledIn.length; i++ )
   console.println( formFieldsFilledIn[i].name );
```

```
var formFieldsModified = sigMods.formFieldsModified;
for( var i = 0; i < formFieldsModified.length; i++ )
   console.println( formFieldsModified[i].name );

var spawnedPages = sigMods.spawnedPagesCreated;
for( var i = 0; i < spawnedPages.length; i++ )
   console.println( spawnedPages[i] );

console.println( sigMods.numPagesDeleted );
```

signatureGetSeedValue

6.0			

Returns a `SeedValue` object that contains the seed value properties of a signature field. Seed values are used to control properties of the signature, including the signature appearance, reasons for signing, and the person.

See `signatureSetSeedValue`.

Returns

A `SeedValue` object.

Example

Access the seed value for a signature field.

```
var f = this.getField( "sig0" );
var seedValue = f.signatureGetSeedValue();
// displays the seed value filter and flags
console.println( "Filter name:" + seedValue.filter);
console.println( "Flags:" + seedValue.flags);
// displays the certificate seed value constraints
var certSpec = seedValue.certspec;
console.println( "Issuer:" + certspec.issuer);
```

signatureInfo

5.0			

Returns a `SignatureInfo` object that contains the properties of the signature. The object is a snapshot of the signature at the time that this method is called. A security handler may specify additional properties that are specific to the security handler.

Note: There are no restrictions on when this method can be called. However, the specified security handler, `oSig`, may not always be available. See the `security.getHandler` method for details.

Some properties of a signature handler, for example, `certificates` (a property of the `SignatureInfo` object), may return a `null` value until the signature is validated. Therefore, `signatureInfo` should be called again after `signatureValidate`.

Parameters

`oSig`	(optional) The `SecurityHandler` object to use to retrieve the signature properties. If not specified, the security handler is determined by the user preferences. (It is usually the handler that was used to create the signature.)

Returns

A `SignatureInfo` object that contains the properties of the signature. This type of object is also used when signing signature fields, signing FDF objects, or with the `FDF` object `signatureValidate` method.

Example

Access SignatureInfo object properties.

```
// Get all info
var f = getField( "Signature1" );
f.signatureValidate();
var s = f.signatureInfo();
console.println( "Signature Attributes:" );
for(i in s) console.println( i + " = " + s[i] );

// Get particular info
var f = this.getField("Signature1"); // uses the ppklite sig handler
var Info = f.signatureInfo();
// Some standard signatureInfo properties
console.println("name = " + Info.name);
console.println("reason = " + Info.reason);
console.println("date = " + Info.date);

// Additional signatureInfo properties from PPKLite
console.println("contact info = " + Info.contactInfo);

// Get the certificate; first (and only) one
var certificate = Info.certificates[0];

// Common name of the signer
console.println("subjectCN = " +  certificate.subjectCN);
console.println("serialNumber = " +  certificate.serialNumber);

// Display some information about the distinguished name of signer
console.println("subjectDN.cn = " + certificate.subjectDN.cn);
console.println("subjectDN.o = " +  certificate.subjectDN.o);
```

signatureSetSeedValue

6.0	D	S	X

Sets properties that are used when signing signature fields. The properties are stored in the signature field and are not altered when the field is signed, the signature is cleared, or when `resetForm` is called. Use `signatureGetSeedValue` to obtain the property settings.

When setting seed values, keep in mind the following:

- Seed values should not be set on signed documents and cannot be set on certified documents. They are primarily used to configure fields on documents that are not yet signed.
- Setting a seed value often causes Acrobat not to display or not to use its default settings. For example, preset reasons are stored in the registry and specifying a signing reason causes the application to ignore the registry list so that only the custom reasons are displayed.

Note: The method can be executed during a batch, application initialization or console event. See "Privileged versus non-privileged context" on page 32 for details.

Certifying signatures are signatures with a `SignatureInfo` object `mdp` property value of `allowNone`, `default`, or `defaultAndComments`.

Not allowed in Adobe Reader.

Refer to the *Acrobat 8.0 Security Feature User Reference* to obtain a deeper understanding of the use of signature seed values.

Parameters

`oSigSeedValue`	A `SeedValue` object containing the signature seed value properties.

SeedValue Object

A generic JavaScript object, passed to `signatureSetSeedValue` and returned by `signatureGetSeedValue`, which represents a signature seed value. It has the following properties:

Property	Type	Access	Description
`certspec`	object	R/W	A seed value `CertificateSpecifier` object, see page 469 for a listing of the properties of this object.
`digestMethod`	Array of strings	R/W	(Acrobat 8) An array of acceptable digest methods to use while signing. The valid string values are `SHA1`, `SHA256`, `SHA384`, `SHA512`, `MD5`, and `RIPEMD160`. **Note:** This is only applicable if the DigitalID contains RSA public/private keys. If they contain DSA public/private keys, then the value is always `SHA1`. The `flags` property indicates whether this is a required constraint.
`filter`	String	R/W	The language-independent name of the security handler to be used when signing. If `filter` is specified and the `flags` property indicates this entry is a required constraint, then the signature handler specified by this entry must be used when signing; otherwise, signing must not take place. If `flags` indicates that this is an optional constraint, then this handler should be used if it is available. If it is not available, a different handler can be used instead.

Property	Type	Access	Description

`flags`	Number	R/W	A set of bit flags controlling which of the following properties of this object are required. The value is the logical OR of the following values, which are set if the corresponding property is required:
			`1: filter`
			`2: subFilter`
			`4: version`
			`8: reasons`
			`16: legalAttestations`
			`32: shouldAddRevInfo`
			`64: digestMethod`
			Usage: 1 specifies filter, 3 specifies filter and sub-filter, and 11 specifies filter, sub-filter, and reasons. If this field is not present, all properties are optional.

`legalAttestations`	Array of Strings	R/W	(Acrobat 7.0) A list of legal attestations that the user can use when creating an Modification Detection and Prevention (MDP) (certified) signature. The value of the corresponding flag in the `flags` property indicates whether this is a required or optional constraint.

`mdp`	String	R/W	(Acrobat 7.0) The MDP setting to use when signing the field. Values are
			`allowNone`
			`default`
			`defaultAndComments`
			While `allowAll` is a legal value, it cancels out the effect of MDP and no certification signature can be used for this field, resulting in the signature being an approval signature, not an certification signature.
			Values are unique identifiers and are described in the table titled "Modification Detection and Prevention (MDP) Values" on page 656.

`reasons`	Array of Strings	R/W	A list of reasons that the user is allowed to use when signing. (Acrobat 8.0) If this array has a single element and that element is a single period '.' and if the `reasons` are marked as required by the `flags` property, then Acrobat 8 will suppress the UI for specifying a reason during signing. This overrides the users preference. If this array is empty and `reasons` are marked as required, an exception will be thrown.

Property	Type	Access	Description
`shouldAddRevInfo`	Boolean	R/W	(Acrobat 8) If set to `true`, instructs the application to carry out revocation checking of the certificate (and the corresponding chains) used to sign, and include all the revocation information within the signature. Only relevant if `subFilter` is `adbe.pkcs7.detached` or `adbe.pkcs7.sha1`, and it is not applicable for `adbe.x509.rsa_sha1`. Hence, if the `subFilter` is `adbe.x509.rsa_sha1` and it's required that revocation information be added, then the signing operation fails. If `shouldAddRevInfo` is `true` and the `flags` property indicates this is a required constraint, then the tasks described above must be performed. If they cannot be performed, then signing must fail. The default value is `false`.
`subFilter`	Array of Strings	R/W	An array of acceptable formats to use for the signature. Refer to the Signature Info object's `subFilter` property for a list of known formats. The first name in the array that matches an encoding supported by the signature handler should be the encoding that is actually used for signing. If `subFilter` is specified and the `flags` property indicates that this entry is a required constraint, then the first matching encodings must be used when signing; otherwise, signing must not take place. If the `flags` property indicates that this is an optional constraint, then the first matching encoding should be used if it is available. If it is not available, a different encoding can be used.
`timeStampspec`	Object	R/W	(Acrobat 7.0) A Seed Value timeStamp Specifier object. It uses the `url` and `flags` properties to specify a timestamp server, see page 472.
`version`	Number	R/W	The minimum required version number of the signature handler to be used to sign the signature field. Valid values are 1 and 2. A value of 1 specifies that the parser must be able to recognize all seed value dictionary entries specified in PDF 1.5. A value of 2 specifies that it must be able to recognize all seed value dictionary entries specified in PDF 1.7 and earlier. The `flags` property indicates whether this is a required constraint. **Note:** The *PDF Reference* version 1.6 and earlier, erroneously indicates that the V entry (the key that corresponds to the `version` parameter) is of type integer. This entry is of type real.

CertificateSpecifier Object

This generic JavaScript object contains the certificate specifier properties of a signature seed value. Used in the `certSpec` property of the `SeedValue` object. This object contains the following properties:

Property	Type	Access	Description

`flags`	Number	R/W	A set of bit flags controlling which of the following properties of this object are required. The value is the logical OR of the following values, which are set if the corresponding property is required:
			`1: subject`
			`2: issuer`
			`4: oid`
			`8: subjectDN`
			`16:` Reserved
			`32: keyUsage`
			`64: url`
			If this field is not present, all properties are optional.

`issuer`	Array of `Certificate` objects	R/W	An array of `Certificate` objects that are acceptable for signing. **Note:** If specified, the signing certificate must be issued by a certificate that is an exact match with one of the certificates in this array. The value of the corresponding flag in the `flags` property indicates whether this is a required or optional constraint.

Property	Type	Access	Description
`keyUsage`	Object	R/W	(Acrobat 8.0) Array of integers, where each integer specifies the acceptable key-usage extension that must be present in the signing certificate. Each integer is constructed as follows: There are two bits used for each key-usage type (defined in RFC 3280) starting from the least significant bit: digitalSignature(bits 2,1), nonRepudiation(4,3) keyEncipherment(6,5) dataEncipherment(8,7) keyAgreement(10,9) keyCertSign(12,11) cRLSign(14,13) encipherOnly(16,15) decipherOnly(18,17) The value of the two bits have the following semantics: 00: the corresponding keyUsage must not be set 01: the corresponding keyUsage must be set 10 and 11: the state of the corresponding `keyUsage` doesn't matter. For example, if it is required that the key-usage type digitalSignature be set and the state of all other key-usage types do not matter, then the corresponding integer would be 0x7FFFFFFD. That is, to represent digitalSignature, set 01 for bits 2 and 1 respectively, and set 11 for all other key-usage types. The value of the corresponding flag in the `flags` property indicates whether this is a required constraint.
`oid`	Array of Strings	R/W	An array of strings that contain Policy OIDs that must be present in the signing certificate. This property is only applicable if the `issuer` property is present. The value of the corresponding flag in the `flags` property indicates whether this is a required or optional constraint.

Property	Type	Access	Description
`subject`	Array of `Certificate` objects	R/W	An array of `Certificate` objects that are acceptable for signing. **Note:** If specified, the signing certificate must be an exact match with one of the certificates in this array. The value of the corresponding flag in the `flags` property indicates whether this is a required or optional constraint.

`subjectDN`	Array of objects	R/W	(Acrobat 8.0) Array of objects, where each object specifies a Subject Distinguished Name (DN) that is acceptable for signing. A signing certificate satisfies a DN requirement if it at least contains all the attributes specified in the DN (it can therefore contain additional DN attributes). If this entry is specified, the signing certificate must satisfy at least one of the DNs in the array.
			DN attribute restrictions are specified in this object by adding them as properties. The properties' key names can either be the corresponding attributes' friendly names or OIDs (as defined in RFC 3280). The properties' value must be of type string.
			The value of the corresponding flag in the `flags` property indicates whether this is a required or optional constraint.
			Example 1: `{cn:"Alice", ou:"Engineering", o:"Acme Inc"}`. The friendly names for the DN attributes (`cn`, `o`, `ou`, and so on) are the ones defined in RDN (see the RDN object, page 590).
			Example 2: `{cn:"Joe Smith", ou: "Engineering", 2.5.4.43:"JS"}`, where OID `2.5.4.43` is used to carry out matching for the "Initials" attribute. The following is sample code to define the above DN:
			`var subjectDN = {cn:"Joe Smith", ou:"Engineering"};`
			`subjectDN["2.4.5.43"] = "JS";`
			Attributes whose value is of type DirectoryString or IA5String can be specified as shown in the example above, whereas for all other value types, for example, `dateOfBirth` whose value is of type GeneralizedTime, the values need to be specified as a hex-encoded binary string.
			For more information about the various attributes and their types, refer to RFC 3280.

Property	Type	Access	Description
`url`	String	R/W	A URL that can be used to enroll for a new credential if a matching credential is not found. A degenerate use of this property is when the URL points to a web service that is a DigitalID store (such as a signature web service that can be used for server-based signing). In that case, the URL indicates that as long as the signer has a DigitalID from that web service, it is acceptable for signing. The value of the corresponding flag in the `flags` property indicates whether this is a required or optional constraint.
`urlType`	String	R/W	(Acrobat 8.0) String indicating the type of URL specified by the `url` property. These are the valid values for Acrobat 8.0: `"HTML"`: The URL points to an HTML website and Acrobat will use the web browser to display its contents. The the value of the `url` bit of the `flags` property is ignored. `"ASSP"`: The URL references a signature web service that can be used for server-based signing. If the `url` bit of the `flags` property indicates that this is a required constraint, this implies that the credential used when signing must come from this server. If this attribute isn't present, it's assumed that the URL points to a HTML site.

Seed value timeStamp specifier object

The properties of the seed value timeStamp specifier object are as follows:

Property	Type	Access	Description
`url`	String	R/W	URL of the timeStamp server providing an RFC 3161 compliant timeStamp.
`flags`	Number	R/W	A bit flag controlling whether the time stamp is required (1) or not required (0). The default is 0.

Example 1

Seed the signature field, which has yet to be signed, with MDP, legal attestations, and permitted reasons for signing.

```
// Obtain the signature Field object:
var f = this.getField("mySigField");
f.signatureSetSeedValue({
```

```
    mdp: "defaultAndComments",
    legalAttestations: ["Trust me and be at ease.",
      "You can surely trust the author."],
    reasons: ["This is a reason", "This is a better reason"],
    flags: 8
  })
```

Example 2

Sets the signing handler as PPKMS and the format as "adbe.pkcs7.sha1".

```
var f = this.getField( "mySigField" );

f.signatureSetSeedValue({
   filter: "Adobe.PPKMS",
   subFilter: ["adbe.pkcs7.sha1"],
   flags: 3
});
```

Example 3

Sets the signing handler as PPKLite and the issuer of the signer's certificate as caCert. Both are mandatory seed values and signing will fail if either constraint is not met.

```
var caCert = security.importFromFile("Certificate", "/C/temp/CA.cer");
f.signatureSetSeedValue({
   filter: "Adobe.PPKLite",
   certspec: {
      issuer: [caCert],
      url: "http://www.example.com/enroll.html",
      flags : 2
   },
   flags: 1
});
```

signatureSign

5.0	D	S	G

Signs the field with the specified security handler. See also `security.getHandler` and `securityHandler.login`.

Note: This method can only be executed during a batch, console, or application initialization event. See "Privileged versus non-privileged context" on page 32 for details. The `event` object contains a discussion of JavaScript events.

Signature fields cannot be signed if they are already signed. Use `resetForm` to clear signature fields.

Parameters

`oSig`	Specifies the `SecurityHandler` object to be used for signing. Throws an exception if the specified handler does not support signing operations. Some security handlers require that the user be logged in before signing can occur. If `oSig` is not specified, this method selects a handler based on user preferences or by prompting the user if `bUI` is `true`.
`oInfo`	(optional) A `SignatureInfo` object specifying the writable properties of the signature. See also `signatureInfo`.
`cDIPath`	(optional) The device-independent path to the file to save to following the application of the signature. If not specified, the file is saved back to its original location.
`bUI`	(optional, Acrobat 6.0) A Boolean value specifying whether the security handler should show the user interface when signing. If `true`, `oInfo` and `cDIPath` are used as default values in the signing dialog boxes. If `false` (the default), the signing occurs without a user interface.
`cLegalAttest`	(optional, Acrobat 6.0) A string that can be provided when creating an certification signature. Certification signatures are signatures where the `mdp` property of the `SignatureInfo` object has a value other than `allowAll`. When creating an certification signature, the document is scanned for legal warnings and these warnings are embedded in the document. A caller can determine what legal warnings are found by first calling the Doc `getLegalWarnings` method. If warnings are to be embedded, an author may provide an attestation as to why these warnings are being applied to a document.

Returns

`true` if the signature was applied successfully, `false` otherwise.

Example 1

Sign the "Signature" field with the PPKLite signature handler:

```
var myEngine = security.getHandler( "Adobe.PPKLite" );
myEngine.login( "dps017", "/c/profile/dps.pfx" );
var f = this.getField("Signature");

// Sign the field
f.signatureSign( myEngine,
   { password: "dps017",              // provide password
     location: "San Jose, CA",        // ... see note below
     reason: "I am approving this document",
     contactInfo: "dpsmith@example.com",
     appearance: "Fancy"});
```

Note: In the above example, a password was provided. This may or may not have been necessary depending whether the `Password Timeout` had expired. The `Password Timeout` can be set programmatically by `securityHandler.setPasswordTimeout`.

Example 2

Sign an certification signature field.

```
var myEngine = security.getHandler( "Adobe.PPKLite" );
myEngine.login( "dps017", "/c/profile/dps.pfx" );

var f = this.getField( "AuthorSigFieldName" );
var s = { reason: "I am the author of this document",
        mdp: "allowNone" };
f.signatureSign({
   oSig: myEngine,
   oInfo: s,
   bUI: false,
   cLegalAttest: "To reduce file size, fonts are not embedded."
});
```

signatureValidate

5.0			

Validates and returns the validity status of the signature in a signature field. This routine can be computationally expensive and take a significant amount of time depending on the signature handler used to sign the signature.

Note: There are no restrictions on when this method can be called. However, the parameter `oSig` is not always available. See `security.getHandler` for details.

Parameters

`oSig`	(optional) The security handler to be used to validate the signature. Its value is either a `SecurityHandler` object or a `SignatureParameters` object. If this handler is not specified, the method uses the security handler returned by the signature's `handlerName` property.
`bUI`	(optional, Acrobat 6.0) If `true`, allows the UI to be shown when validating, if necessary. The UI may be used to select a validation handler if none is specified. The default is `false`.

Returns

The validity status of the signature. Validity values are:

- **`-1`** — Not a signature field
- **`0`** — Signature is blank
- **`1`** — Unknown status
- **`2`** — Signature is invalid
- **`3`** — Signature of document is valid, identity of signer could not be verified
- **`4`** — Signature of document is valid and identity of signer is valid.

See the `signVisible` and `statusText` properties of the `SignatureInfo` object.

SignatureParameters object

A generic object with the following properties that specify which security handlers are to be used for validation by `signatureValidate`:

`oSecHdlr`	The security handler object to use to validate this signature.
`bAltSecHdlr`	If `true`, an alternate security handler, selected based on user preference settings, may be used to validate the signature. The default is `false`, which means that the security handler returned by the signature's `handlerName` property is used to validate the signature. This parameter is not used if `oSecHdlr` is provided.

Example

Validate a signature, then report to the console.

```
var f = this.getField("Signature1") // Get signature field
var status = f.signatureValidate();
var sigInfo = f.signatureInfo();
if ( status < 3 )
    var msg = "Signature not valid! " + sigInfo.statusText;
else
   var msg = "Signature valid! " + sigInfo.statusText;
app.alert(msg);
```

FullScreen

The interface to fullscreen (presentation mode) preferences and properties. To acquire a `fullScreen` object, use `app.fs`.

FullScreen properties

backgroundColor

5.0	P		

The background color of the screen in full screen mode. See "Color arrays" on page 193 for details.

Type

Color Array

Access

R/W

Example

```
app.fs.backgroundColor = color.ltGray;
```

clickAdvances

5.0	P		

Specifies whether a mouse click anywhere on the page causes the page to advance.

Type

Boolean

Access

R/W

cursor

5.0	P		

Determines the behavior of the pointer in full screen mode. The convenience `cursor` object defines all the valid cursor behaviors:

Cursor Behavior	Keyword
Always hidden	`cursor.hidden`
Hidden after delay	`cursor.delay`
Visible	`cursor.visible`

Type

Number

Access

R/W

Example

```
app.fs.cursor = cursor.visible;
```

defaultTransition

5.0	P		

The default transition to use when advancing pages in full screen mode. Use `transitions` to obtain list of valid transition names supported by the viewer.

"No Transition" is equivalent to `app.fs.defaultTransition = "";`

Type

String

Access

R/W

Example

Put the document into presentation mode.

```
app.fs.defaultTransition = "WipeDown";
app.fs.isFullScreen = true;
```

escapeExits

5.0	P	S	

A Boolean value specifying the escape key can be used to exit full screen mode.

Note: (Version 8.0) This property can only set to `false` during batch and console events. See "Privileged versus non-privileged context" on page 32 for details. The `event` object contains a discussion of JavaScript events.

Type

Boolean

Access

R/W

isFullScreen

5.0			

If `true`, the viewer is in full screen mode rather than regular viewing mode, which is possible only if one or more documents are open for viewing.

Note: A PDF document being viewed from within a web browser cannot be put into full screen mode.

Type

Boolean

Access

R/W

Example

```
app.fs.isFullScreen = true;
```

In the above example, the viewer is set to full screen mode. If `isFullScreen` was previously `false`, the default viewing mode would be set. (The default viewing mode is defined as the original mode the Acrobat application was in before full screen mode was initiated.)

loop

5.0	P		

Specifies whether the document will loop around to the beginning of the document in response to a page advance (whether generated by mouse click, keyboard, or timer) in full screen mode.

Type

Boolean

Access

R/W

timeDelay

5.0	P		

The default number of seconds before the page automatically advances in full screen mode. See `useTimer` to activate or deactivate automatic page turning.

Type

Number

Access

R/W

Example

Set full screen properties, then go into full screen mode.

```
app.fs.timeDelay = 5;           // Delay 5 seconds
app.fs.useTimer = true;         // Activate automatic page turning
app.fs.usePageTiming = true;    // Allow page override
app.fs.isFullScreen = true;     // Go into full screen
```

transitions

5.0			

An array of strings representing valid transition names implemented in the viewer. `No Transition` is equivalent to setting `defaultTransition` to the empty string:

```
app.fs.defaultTransition = "";
```

Type

Array

Access

R

Example

Produce a listing of the currently supported transition names.

```
console.println("[" + app.fs.transitions + "]");
```

usePageTiming

5.0	P		

Specifies whether automatic page turning will respect the values specified for individual pages in full screen mode. Set transition properties of individual pages using `setPageTransitions`.

Type

Boolean

Access

R/W

useTimer

5.0	P		

Specifies whether automatic page turning is enabled in full screen mode. Use `timeDelay` to set the default time interval before proceeding to the next page.

Type

Boolean

Access

R/W

global

This is a static JavaScript object that allows you to share data between documents and to have data be persistent across sessions. Such data is called *persistent global data*. Global data-sharing and notification across documents is done through a subscription mechanism, which allows you to monitor global data variables and report their value changes across documents.

Note: Beginning with version 8.0, the access to global variables has changed somewhat, the details are described below:

The JavaScript category in the Preferences dialog box (Ctrl + K) has a new security check box: Enable Global Object Security Policy.

- When checked, the default, each time a global variable is written to, the origin which set it is remembered. Only origins that match can then access the variable.
  - For files, this means only the file that set it, having the same path it had when the variable was set, can access the variable.
  - For documents from URLs it means only the host which set it can access the variable.

  There is an important exception to the restrictions described above, global variables can be defined and accessed in a privileged context, in the console, in a batch sequence and in folder JavaScript. For more information on privileged contexts, see "Privileged versus non-privileged context" on page 32.
- When not checked, documents from different origins are permitted to access the variable; this is the behavior previous to version 8.0.

For examples, see section "Global object security policy" on page 483.

Creating global properties

You can specify global data by adding properties to the global object. The property type can be a String, a Boolean value, or a Number.

For example, to add a variable called `radius` and to allow all document scripts to have access to this variable (provided "Enable global object security policy" is not checked), the script defines the property:

```
global.radius = 8;
```

The global variable `radius` is now known across documents throughout the current viewer session. Suppose two files, `A.pdf` and `B.pdf`, are open and the global declaration is made in `A.pdf`. From within either file (`A.pdf` *or* `B.pdf`), you can calculate the volume of a sphere using `global.radius`.

```
var V = (4/3) * Math.PI * Math.pow(global.radius, 3);
```

In either file, you obtain the same result, 2144.66058. If the value of `global.radius` changes and the script is executed again, the value of `V` changes accordingly.

Deleting global properties

To delete a variable or a property from the `global` object, use the `delete` operator to remove the defined property. Information on the reserved JavaScript keyword `delete` can be found in the JavaScript 1.5 documentation (see "Related documentation" on page 28).

For example, to remove the `global.radius` property, call the following script:

```
delete global.radius
```

Global object security policy

The new global security policy places restrictions on document access to global variables. For more information and exceptions, see the Note in "global" on page 482.

In a document, named `docA.pdf`, execute the following script in a non-privileged context (mouse-up button):

```
global.x = 1
global.setPersistent("x", true);
```

The path for `docA.pdf` is the origin saved with the `global.x` variable; consequently, `docA.pdf` can access this variable:

```
console.println("global.x = " + global.x);
```

To set this global from `docA.pdf`, we execute `global.x = 3`, for example, in any context.

To have a document with a different path get and set this global variable, the getting and setting must occur in a trusted context, with a raised level of privilege. The following scripts are folder JavaScript.

```
myTrustedGetGlobal = app.trustedFunction ( function()
{
   app.beginPriv();
   var y = global.x;
   return y
   app.endPriv();
});
myTrustedSetGlobal = app.trustedFunction ( function(value)
{
   app.beginPriv();
   global.x=value;
   app.endPriv();
});
```

Another document, `docB.pdf` can access the `global.x` variable through the above trusted functions:

```
// Mouse up button action from doc B
console.println("The value of global.x is " + myTrustedGetGlobal());
```

The global can also be set from `docB.pdf`:

```
// Set global.x from docB.pdf
myTrustedSetGlobal(2);
```

Once `global.x` has been set from `docB.pdf`, the origin is changed; `docA.pdf` cannot access `global.x` directly unless it is through a trusted function:

```
// Execute a mouse up button action from docA.pdf
console.println("The value of global.x is " + myTrustedGetGlobal());
```

global methods

setPersistent

3.01			

Controls whether a specified variable is persistent across invocations of Acrobat.

Persistent global data only applies to variables of type Boolean, Number, or String.

Upon application exit, persistent global variables are stored in the `glob.js` file located in the user's folder for folder-level scripts and re-loaded at application start. For Acrobat 6.0 or later, there is a 2-4 KB limit on the size of this file. Any data added to the string after this limit is dropped.

When specifying persistent global variables, you should use a naming convention. For example, you can give your variables the form `myCompany_variableName`. This prevents collisions with other persistent global variable names throughout the documents.

Parameters

`cVariable`	The variable (global property) for which to set persistence.
`bPersist`	If `true`, the property will exist across Acrobat viewer sessions. If `false` (the default) the property will be accessible across documents but not across the Acrobat viewer sessions.

Example

Make the `radius` property persistent and accessible for other documents.

```
global.radius = 8;                          // Declare radius to be global
global.setPersistent("radius", true);       // Now say it's persistent
```

The volume calculation, defined above, will now yield the same result across viewer sessions, or until the value of `global.radius` is changed.

subscribe

5.0			

Allows you to automatically update fields when the value of a global variable changes. If the specified property `cVariable` is changed, even in another document, the specified function `fCallback` is called. Multiple subscribers are allowed for a published property.

Parameters

`cVariable`	The global property.
`fCallback`	The function to call when the property is changed.

The syntax of the callback function is as follows:

```
function fCallback(newval) {
// newval is the new value of the global variable you
// have subscribed to.
   < code to process the new value of the global variable >
}
```

The callback will be terminated when the document from which the script was originally registered is closed, or the (global) property deleted.

Example

In this example, it is assumed that Enable Global Object Security Policy is not checked. There are two files, `setRadius.pdf` and `calcVolume.pdf`, open in Acrobat or Adobe Reader:

`setRadius.pdf` has a single button with the code

```
global.radius = 2;
```

The `calcVolume.pdf` has a document-level JavaScript named `subscribe`:

```
global.subscribe("radius", RadiusChanged);
function RadiusChanged(x)// callback function
{
   var V = (4/3) * Math.PI * Math.pow(x,3);
   this.getField("MyVolume").value = V;// Put value in text field
}
```

With both files open, clicking on the button in `setRadius.pdf` immediately gives an update in the text field "MyVolume" in `calcVolume.pdf` of 33.51032 (as determined by `global.radius = 2`).

HostContainer

This object manages communication between a PDF document and a corresponding host container that the document is contained within, such as an HTML page. The host container for a document is specified by the Doc `hostContainer` property.

The `Embedded PDF` object provides the corresponding API for the object model of the container application.

HostContainer properties

messageHandler

7.0.5			

A notification object that is called if a script in the host container calls the `postMessage` method. This object may expose the following methods and properties:

Method/Property	Description
`onMessage`	(Optional) A method that is called in response to `postMessage`. The message is delivered asynchronously. The method is passed a single array parameter containing the array that was passed to `postMessage`.
`onError`	(Optional) A method that is called in response to an error. The method is passed an `Error` object and an array of strings corresponding to the message that caused the error. The `name` property of the `Error` object is set to one of these: `"MessageGeneralError"`: A general error occurred. `"MessageNotAllowedError"`: The operation failed for security reasons. If an error occurs and this property is undefined, the error will not be delivered (unlike messages, errors are not queued).
`onDisclose`	A required method that is called to determine whether the host application is permitted to send messages to the document. This allows the PDF document author to control the conditions under which messaging can occur for security reasons. The method should be set during the `Doc/Open` event. The method is passed two parameters: **`cURL`** — The URL indicating the location of the host container (for example, the URL of an HTML page using an <OBJECT> tag). **`cDocumentURL`** — The URL of the PDF document that disclosure is being checked for. If the method returns `true`, the host container is permitted to post messages to the message handler.

Method/Property	Description
`allowDeliver WhileDocIsModal`	A Boolean value indicating whether messages and errors will be delivered while the document is in a modal state. By default (`false`), messages and errors are queued and not delivered to the `onMessage` and `onError` handlers if the application is currently displaying a modal dialog. The `app.isModal` property can be used to detect this case.

Note: Instead of specifying a method, `onDisclose` may specify the value `HostContainerDisclosurePolicy.SameOriginPolicy`, which means that the document will be disclosed to the host container if they both originate from the same location. In this case, the origination is determined by the scheme, server, and port. The scheme must be `http`, `https`, or `ftp` for the document to be disclosed.

When these methods are invoked, the `this` object will be the `messageHandler` instance that the method is being called on.

Other methods and properties can be added to `messageHandler` provided that they do not begin with `on`.

If `messageHandler` is set to `null` or an object without an `onMessage` method, messages sent by `postMessage` are queued until the property is set to a valid `messageHandler` instance.

Messages are guaranteed to be delivered in the order in which they are posted and errors are guaranteed to be delivered in the order in which they occurred. However, there is no correspondence between the delivery order of messages and errors.

Exceptions thrown from within the handler methods will be discarded. If an exception is thrown from within `onDisclose`, the function will be treated as a failure. Messages and errors will not be delivered while inside an `onMessage` / `onError` / `onDisclose` handler.

Type

Object

Access

R/W

Example

A generic host container message handler.

```
this.hostContainer.messageHandler =
{
   onMessage: function(aMessage)
   {
      for(var i = 0; i < aMessage.length; i++)
       console.println("Recv'd Msg[ " + i + "]: " + aMessage[i]);
   },
   onError: function(error, aMessage){ },
   onDisclose: HostContainerDisclosurePolicy.SameOriginPolicy
};
```

HostContainer methods

postMessage

7.0.5			

Sends a message asynchronously to the message handler for the host container of the PDF document. For this message to be delivered, the host container (for example, an <OBJECT> element in an HTML page) must have registered for notification by setting its `messageHandler` property. The message is passed to the `onMessage` method of the `messageHandler`.

The messages are submitted to a queue until they are delivered. If the queue exceeds a maximum number of messages, a parameter error is thrown until some of the messages in the queue have been delivered.

Parameters

`aMessage`	An array of one or more strings that are passed to the `onMessage` method of the `messageHandler` property.

Example

```
var aMessage = ["MyMessageName", "Message Body"];
this.hostContainer.postMessage(aMessage);
```

Icon

This generic JavaScript object is an opaque representation of a Form XObject appearance stored in the Doc `icons` property. It is used with Field objects of type `button`. The `icon` object contains the following property:

Property	Type	Access	Description
`name`	string	R	The name of the icon. An icon has a name if it exists in the document-level named icons tree.

Icon Stream

This generic JavaScript object represents an icon stream. It is used by `app.addToolButton` and `collab.addStateModel`. It has the following properties:

Property	Description
`read(nBytes)`	A function that takes the number of bytes to read and returns a hex-encoded string. The data should be the icon representation as 32 bits per pixel with 4 channels (ARGB) or 8 bits per channel with the channels interleaved. If the icon has multiple layers, the function may return the pixels for the topmost layer, followed by the next layer behind it, and so on.
`width`	The icon width in pixels.
`height`	The icon height in pixels.

The `util.iconStreamFromIcon` method can be used to convert an `Icon` object to an `Icon Stream` object.

identity

5.0		S	

This is a static object that identifies the current user of the application.

Note: The `identity` object properties are only accessible during batch, console and application initialization events to protect the privacy of the user. See "Privileged versus non-privileged context" on page 32 for details.

identity properties

corporation

The corporation name that the user has entered in the Identity preferences panel.

Type

String

Access

`R/W`

email

The email address that the user has entered in the Identity preferences panel.

Type

String

Access

`R/W`

loginName

The login name as registered by the operating system.

Type

String

Access

`R`

name

The user name that the user entered in the Identity preferences panel.

Type

String

Access

R/W

Example

The following can be executed in the console, or, perhaps, a folder-level JavaScript.

```
console.println("Your name is " + identity.name);
console.println("Your e-mail is " + identity.email);
```

Index

5.0			

An object that represents a Catalog-generated index. It is non-creatable and returned by various methods of the `search` object and `catalog` object. You use this object to perform various indexing operations using Catalog. You can find the status of the index with a search.

Index properties

available

Specifies whether the index is available for selection and searching. An index may be unavailable if a network connection is down or a CD-ROM is not inserted, or if the index administrator has brought the index down for maintenance purposes.

Type

Boolean

Access

R

name

The name of the index as specified by the index administrator at indexing time.

See `search.indexes`, which returns an array of the Index objects currently accessed by the search engine.

Type

String

Access

R

Example

This example enumerates all of the indexes and writes their names to the console.

```
for (var i = 0; i < search.indexes.length; i++) {
   console.println("Index[" + i + "] = " + search.indexes[i].name);
}
```

path

The device-dependent path where the index resides. See the *PDF Reference* version 1.7 for exact syntax of the path.

Type

String

Access

R

selected

Specifies whether the index participates in the search. If `true`, the index is searched as part of the query. If `false` it is not searched. Setting or unsetting this property is equivalent to checking the selection status in the index list dialog box.

Type

Boolean

Access

R/W

Index methods

build

6.0		S	P

Builds the index associated with the Index object using the Catalog plug-in. This method does not build a new index.

The index is built at the same location as the index file. If the index already exists, the included directories are scanned again for changes and the index is updated. If the index does not exist, a new index can be defined and built through the user interface.

If Catalog is idle, the index build is started immediately; otherwise, it gets queued with Catalog.

Note: (Acrobat 7.0) This method can only be executed during a batch or console event. See "Privileged versus non-privileged context" on page 32 for details. The `event` object contains a discussion of JavaScript events.

Parameters

`cExpr`	(optional) An expression to be evaluated after the build operation on the index is complete. The default is no expression. See the *PDF Reference* version 1.7 for more details.
`bRebuildAll`	(optional) If `true`, a clean build is performed. The index is first deleted and then built. The default is `false`.

Returns

A `CatalogJob` object that can be used to check the job parameters and status.

Example

```
/* Building an index */
if (typeof catalog != "undefined")  {
   var idx = catalog.getIndex("/c/mydocuments/index.pdx");
   var job = idx.build("Done()", true);
   console.println("Status : ", job.status);
}
```

Link

This object is used to set and get the properties and to set the JavaScript action of a link.

Link objects can be obtained from the Doc methods `addLink` or `getLinks`. (See also `removeLinks`.)

Link properties

borderColor

6.0	D		X

The border color of a Link object. See "Color arrays" on page 193 for information on defining color arrays and how colors are used with this property.

Type

Array

Access

R/W

borderWidth

6.0	D		X

The border width of the Link object.

Type

Integer

Access

R/W

highlightMode

6.0	D		X

The visual effect to be used when the mouse button is pressed or held down inside an active area of a link. The valid values are:

`None`
`Invert` (the default)
`Outline`
`Push`

Type

String

Access

R/W

rect

6.0	D		X

The rectangle in which the link is located on the page. Contains an array of four numbers, the coordinates in rotated user space of the bounding rectangle, listed in the following order: upper-left *x*, upper-left *y*, lower-right *x* and lower-right *y*.

Type

Array

Access

R/W

Link methods

setAction

6.0	D		X

Sets the specified JavaScript action for the MouseUp trigger for the Link object.

Note: This method will overwrite any action already defined for this link.

Parameters

`cScript`	The JavaScript action to use.

Marker

A Marker object represents a named location in a media clip that identifies a particular time or frame number, similar to a track on an audio CD or a chapter on a DVD. Markers are defined by the media clip itself.

A Marker object can be obtained from the `Markers.get` method.

Marker properties

frame

6.0			

A frame number, where 0 represents the beginning of media. For most players, markers have either a frame or a time value, but not both.

Type

Number

Access

R

index

6.0			

An index number assigned to this marker. Markers have sequential index numbers beginning with 0, but the numbers may not be in the same order that the markers appear in the media.

Type

Number

Access

R

name

6.0			

The name of this marker. Each marker in a media clip has a unique name.

Type

String

Access

R

Example

Get a marker by its index, then print the name of the marker to the console.

```
// Assume player is a MediaPlayer object
var markers = player.markers;
// Get marker with index of 2
var markers = g.get( { index: 2 } );
console.println( "The marker with index of " + markers.index
   +", has a name of " + index.name );
```

time

6.0			

A time in seconds, where 0 represents the beginning of media. For most players, markers have either a frame or a time value, but not both.

Type

Number

Access

R

Example

Get a named marker, then print the time in seconds from the beginning of the media, of that marker.

```
// Assume player is a MediaPlayer object
var markers = player.markers;
// Get marker with name of "Chapter 1"
var markers = g.get( { name: "Chapter 1" } );
console.println( "The named marker \"Chapter 1\", occurs at time "
   + markers.time);
```

Markers

The `markers` property of a MediaPlayer is a Markers object that represents all of the markers found in the media clip currently loaded into the player. A marker is a named location in a media clip that identifies a particular time or frame number, similar to a track on an audio CD or a chapter on a DVD. Markers are defined by the media clip.

The constructor is `app.media.Markers`.

Markers properties

player

6.0			

The `MediaPlayer` object that this Markers object belongs to.

Type

`MediaPlayer` object

Access

R

Markers methods

get

6.0			

Looks up a marker by name, index number, time in seconds, or frame number and returns the `Marker` object representing the requested marker. The object parameter should contain either a name, index, time, or frame property. A marker name can also be passed in directly as a string.

If a time or frame is passed in, the nearest marker at or before that time or frame is returned. If the time or frame is before any markers in the media, null is returned.

Parameters

An object or string representing the name, index number, time in seconds, or the frame number of the marker. The object parameter should contain either a name, index, time, or frame property. A marker name can also be passed in directly as a string.

Returns

`Marker` object or `null`

Marker index numbers are assigned sequentially starting with 0. They are not necessarily in order by time or frame. In particular, note that these are not the same values that Windows Media Player uses for marker numbers. To find all of the available markers in a media clip, call `MediaPlayer.markers.get` in a loop starting with `{index: 0}` and incrementing the number until `get` returns `null`.

Example 1

Count the number of markers on the media clip.

```
var index, i =  0;
// assume player is a MediaPlayer object.
var m = player.markers;
while ( (index = m.get( { index: i } ) ) != null ) i++;
console.println("There are " + i + " markers.");
```

Example 2

Get markers by name, index, time and frame.

```
// Get a marker by name, two different ways
var marker = player.markers.get( "My Marker" );
var marker = player.markers.get({ name: "My Marker" });
// Get a marker by index
var marker = player.markers.get({ index: 1 });
// Get a marker by time
var marker = player.markers.get({ time: 17.5 });
// Get a marker by frame
var marker = player.markers.get({ frame: 43 });
```

MediaOffset

A MediaOffset represents a position in a MediaClip, specified by time or frame count. The position can be absolute (that is, relative to the beginning of the media) or relative to a named marker.

The MediaOffset object can have the properties specified below, or it can simply be a number, which is interpreted as `{time: number}`.

Some media formats (such as QuickTime) are time-based and others (such as Flash) are frame-based. A MediaOffset that specifies a time or frame must match the media format in use. If both time and frame are specified, the results are undefined. The incorrect one may be ignored, or a JavaScript exception may be thrown.

The MediaOffset object is used by `MediaPlayer.`**`seek`**, `MediaPlayer.`**`where`**, `MediaSettings.`**`endAt`**, and `MediaSettings.`**`startAt`**.

MediaOffset properties

frame

6.0			

A frame number. If the `marker` property is also present, this frame number is relative to the specified marker and may be positive, negative, or zero. Otherwise, it is relative to the beginning of media and may not be negative. Note that `{frame: 0}` represents the beginning of media.

Type

Number

Access

R/W

marker

6.0			

The name of a specific marker in the media.

Type

String

Access

R/W

time

6.0			

A time in seconds, or `Infinity`. If the `marker` property is also present, this time is relative to the specified marker and is a nonnegative value, but not `Infinity`. Otherwise, the time is relative to the beginning of media and must not be negative. Note that the offset { time: 0 } represents the beginning of media.

Type

Number

Access

R/W

Example

These are examples of absolute and relative offsets.

```
{ time: 5.4 } // offset 5.4 seconds from the beginning of media
{ marker: "Chapter 1", time: 17 } // 17 seconds after "Chapter 1"
```

These offsets can be used by the `MediaPlayer.`**`seek`** method.

```
// assume player is a MediaPlayer object
player.seek({ time: 5.4 });
player.seek({ marker: "Chapter 1", time: 17 });
```

MediaPlayer

A MediaPlayer object represents an instance of a multimedia player such as QuickTime, Windows Media Player, or others. Its `settings` and `events` properties let you manipulate the player from JavaScript code and handle events that the player triggers. MediaPlayer is not part of a PDF file; it is a transient object created in memory when needed.

MediaPlayer properties

annot

6.0			

A reference to the screen annotation associated with a MediaPlayer. This property exists only for a MediaPlayer object that is connected to a screen annotation. The property is set by `app.media.`**`addStockEvents`** or by methods that call `addStockEvents` indirectly, such as `app.media.`**`openPlayer`**.

Type

`ScreenAnnot` object

Access

R/W

defaultSize

6.0			

A read-only object containing the width and height of the MediaPlayer's MediaClip:

```
{ width: number, height: number }
```

If the media player is unable to provide this value, it is `undefined`.

Type

Object

Access

R

doc

6.0			

A reference to the Doc that owns the MediaPlayer.

Type

Object

Access

R

events

6.0			

An `Events` object containing the EventListeners that are attached to a MediaPlayer. See `Events` object for details.

Type

`Events` object

Access

R/W

Example

Create a media player, then modify the events of that player. The script is executed as a Rendition action with an associated rendition.

```
var events = new app.media.Events;
var player = app.media.createPlayer();
player.events.add({
   onReady: function() { console.println("The player is ready"); }
});
player.open();
```

hasFocus

6.0			

A Boolean value that is `true` if the media player is open and has the keyboard focus.

Type

Boolean

Access

R

id

6.0			

The player ID for the player software that this player is using. It is `undefined` if the player has not been opened. This player ID is the same value that is found in `PlayerInfo.id` for the media player software that implements this player.

Type

Boolean

Access

R

Example

Print the player ID to the console.

```
// Assume args has been defined
var player = app.media.openPlayer( args )
console.println("player.id = " + player.id);
// In the console, this script could possibly print...
player.id = vnd.adobe.swname:ADBE_MCI
```

innerRect

6.0			

A rectangle array representing the player's inner rectangle. As with other such arrays in JavaScript, the coordinates are in the order [left, top, right, bottom]. The rectangle does not include a window title or other such gadgets around the edges of the player, but it does include the player controller, if present. It is undefined if the player is not open.

For a docked media player, this rectangle is in device space and is read-only (it throws an exception if you try to set it). Instead, use `triggerGetRect` to cause a docked player to be resized. For a floating media player, the rectangle is in screen coordinates and is writable, but the user's security settings may override a value you set here. For example, if you try to move a floating media player offscreen, it may be forced back on-screen. This will not throw an exception. You can read this property after writing it to see if your value was overridden.

See also `outerRect`.

Type

Array

Access

R/W

isOpen

6.0			

A Boolean value that is `true` if the media player is currently open. Use `MediaPlayer.open` and `MediaPlayer.close` to open or close a player.

Type

Boolean

Access

R

isPlaying

6.0			

A Boolean value that is `true` if the media is currently playing. It is `false` if the player is not open, or if the media is paused, stopped, fast forwarding or rewinding, or in any other state.

Type

Boolean

Access

R

markers

6.0			

A collection of all the markers available for the current media.

See `Markers` object for details of this property.

Type

`Markers` Object

Access

R

Example

See "Example 2" on page 513 on for an illustration of usage.

outerRect

6.0			

A rectangle array representing the player's outer rectangle. As with other such arrays in JavaScript for Acrobat, the coordinates are in the order [left, top, right, bottom]. This rectangle includes any player controller, window title, and other such gadgets around the edges of the player. It is `undefined` if the player is not open.

For a docked media player, this rectangle is in device space and is read-only. It will throw an exception if you try to set it. Instead, use `MediaPlayer.triggerGetRect` to cause a docked player to be resized. For a floating media player, the rectangle is in screen coordinates and is writable, but the user's security settings may override a value you set here. For example, if you try to move a floating media player offscreen, it may be forced back on-screen. This will not throw an exception. You can read this property after writing it to see if your value was overridden.

See also `innerRect`.

Type

Array

Access

R/W

page

6.0			

The page number in which a docked media player appears. It is `undefined` for players that are not docked. A docked media player can be moved to another page by changing its `page` property, which triggers a GetRect (see `onGetRect`) event.

Type

Number

Access

R/W

Example

Play a media clip on page 1 (base zero). The placement of the media player on page 1 is the same as the screen annotation on page 0.

```
var player = app.media.openPlayer({
     rendition: this.media.getRendition( "myClip" ),
     annot: this.media.getAnnot({ nPage:0, cAnnotTitle:"myScreen" }),
     settings: { windowType: app.media.windowType.docked }
   });
player.page = 1;
```

See `onGetRect` and `triggerGetRect` for variations on this example.

settings

6.0			

Includes all of the settings that are used to create a MediaPlayer. See `MediaSettings` object for a complete list.

Note: In Acrobat 6.0, changing a property in `MediaPlayer.settings` after the player has been created has no effect. This may be changed in a future release to make these settings live. For compatibility with current and future releases, avoid changing any settings properties while a player is open.

Type

`MediaSettings` object

Access

R/W

uiSize

6.0			

An array containing the size of the controller of the player for each edge of the player, in the same order as a window rectangle: [left, top, right, bottom]. Each of these values is normally a positive value or zero. These values do not include window gadgets such as title bars.

This property is not available until the Ready event is triggered (see `onReady` and `afterReady`). Unlike most MediaPlayer properties, it is permissible to read it during an on event method such as `onReady`.

Type

Array

Access

R

Example

Get the `uiSize` of the player. This code is executed as a Rendition action event.

```
var args = {
   events: {
      onReady: function () {
         console.println("uiSize = " + player.uiSize );
      }
   }
};
var player = app.media.openPlayer(args);
```

visible

6.0			

A Boolean value controlling whether the player is visible. Unlike `MediaPlayer.settings.visible`, this property takes effect immediately. If the player is not open, reading this property returns `undefined` and setting it throws an exception.

Setting this property may trigger events. For example, if the player is visible and has the focus, making it invisible triggers a Blur event.

Type

Boolean

Access

R/W

Example

Play the audio *only* of a video clip

```
// Assume a definition of args
var player = app.media.openPlayer(args);
player.visible = false;
```

MediaPlayer methods

close

6.0			

Closes the media player if it is open. Does nothing (and is not an error) if the player is closed.

The `eReason` parameter should be a value from the `app.media.closeReason` enumeration. This value is passed through to the `event.media.closeReason` property for the Close event (see `onClose` and `afterClose`) that the `close` method is triggered.

If the player has the keyboard focus, a Blur event (`onBlur`/`afterBlur`) is triggered before the Close event. Other events, such as Status (`onStatus`/`afterStatus`) and Stop (`onStop`/`afterStop`), may also be triggered depending on the particular media player.

Parameters

`eReason`	`eReason` is a value from the `app.media.closeReason` enumeration.

open

6.0			

Attempts to open the media player as specified by `MediaPlayer.settings`. If the player is already open, an exception is thrown. If the player was previously opened and then closed, `open` may be called to open the player again. This uses the same JavaScript object as before but opens a new instance of the actual media player. In this case, for example, the new player does not remember the playback position from the old player.

For a docked player, a GetRect event (`onGetRect`) is triggered when the player is opened.

If `MediaPlayer.settings.autoPlay` is `true` (the default), playback begins and a Play event (`onPlay`/`afterPlay`) is triggered.

The `open` method may result in a security prompt dialog box, depending on the user's settings. It may also result in events being triggered in objects such as other media players and screen annotations. For example, if another media player has the keyboard focus, it will receive a Blur event (`onBlur`/`afterBlur`).

If `bAllowSecurityUI` is `false`, the `open` method never displays a security prompt, but returns a failure code instead.

For a media player in a floating window, additional security checks are made against the user's settings. For example, the user may specify that title bars are required on all floating player windows. If `MediaPlayer.settings.floating` contains options that the user does not allow, `bAllowFloatOptionsFallback` controls what happens. If it is `false`, playback is disallowed and an error code is returned. If it is `true`, the options in `MediaPlayer.settings.floating` are changed as needed to conform to the user's security settings and `open` proceeds with those changed settings.

The return value is an object that currently contains one property, `code`, which is a result code from the `app.media.openCode` enumeration. If your PDF is opened in a future version of Acrobat, there may be additional properties in this object, or a code value added in that future version. Be sure to handle any such values gracefully.

Parameters

`bAllowSecurityUI`	(optional) The default is `true`. See the description of this parameter given above.
`bAllowFloatOptionsFallback`	(optional) The default is `true`. See the description of this parameter given above.

Returns

An object with a `code` property

Example

See "Example 1" on page 165 for an example of usage.

pause

6.0			

Pauses playback of the current media and triggers a Pause event (`onPause`/`afterPause`). The Pause event may occur during the `pause` call or afterward, depending on the player.

The `pause` method has no effect if the media is already paused or stopped, or if playback has not yet started or has completed. Not every media player and media format supports `pause`. In particular, most streaming formats do not support `pause`. Players may either throw an exception or silently ignore `pause` in these cases.

Example

See "Example 2" on page 513 for an example of usage.

play

6.0			

Starts playback of the current media and triggers a Play event (`onPlay`/`afterPlay`). The Play event may occur during the `play` call or afterward, depending on the player.

If the media is already playing, it continues playing and no event is triggered. If it is paused, rewinding, or fast forwarding, it resumes playback at the current position. If it is stopped, either at the beginning or end of media, playback starts from the beginning.

Example

See "Example 2" on page 513 for an example of usage.

seek

6.0			

Sets the current media's playback location to the position described by the `MediaOffset` object contained in `oMediaOffset`.

If the media is playing, it continues playing at the new location. If the media is paused, it moves to the new location and remains paused there. If the media is stopped, the result will vary depending on the player.

Media players handle seek errors in different ways. Some ignore the error and others throw a JavaScript exception.

Most, but not all, media players trigger a Seek event (`onSeek`/`afterSeek`) when a seek is completed.

The seek operation may take place during the execution of the `seek` method or later, depending on the player. If `seek` returns before the seek operation is completed and you call another player method before the seek is completed, the results will vary depending on the player.

Parameters

`oMediaOffset`	A `MediaOffset` object, the properties of which indicate the playback location to be set.

Example 1

```
// Rewind the media clip
player.seek({ time: 0 });

// Play starting from marker "First"
player.seek({ marker: "First" });

// Play starting five seconds after marker "One"
player.seek({ marker: "One", time: 5 });
```

Example 2

The following script randomly plays (famous) quotations. The media is an audio clip (`.wma`) of famous quotations, which supports markers and scripts. The `afterReady` listener counts the number of markers, one at the beginning of each quotation. At the end of each quotation, there is also an embedded command script. The `afterScript` listener watches for these commands and if it is a "pause" command, it pauses the player.

```
var nMarkers=0;
var events = new app.media.Events;
events.add({
```

```
    // Count the number of quotes in this audio clip, save as nMarkers
    afterReady: function()
    {
      var g = player.markers;
      while ( (index =  g.get( { index: nMarkers } ) ) != null )
        nMarkers++;
    },
    // Each quote should be followed by a script, if the command is to
    //  pause, then pause the player.
    afterScript: function( e ) {
      if ( e.media.command == "pause" ) player.pause();
    }
});
var player = app.media.openPlayer({
    rendition: this.media.getRendition( "myQuotes" ),
    settings: { autoPlay: false },
    events: events
});
// Randomly choose a quotation
function randomQuote() {
    var randomMarker, randomMarkerName;
    console.println("nMarkers = " + nMarkers);
    // Randomly choose an integer between 1 and nMarkers, inclusive
    randomMarker = Math.floor(Math.random() * 100) % ( nMarkers ) + 1;
    // Indicate what quotation we are playing
    this.getField("Quote").value = "Playing quote " + randomMarker;
    // The marker names are "quote 1", "quote 2", "quote 3", etc.
    randomMarkerName = "quote " + randomMarker;
    // See the marker with the name randomMarkerName
    player.seek( { marker: randomMarkerName } );
    player.play();
}
```

Action is initiated by the mouse-up button action such as

```
try { randomQuote() } catch(e) {}
```

setFocus

6.0			

Sets the keyboard focus to the media player and triggers a Focus event (`onFocus/afterFocus`). If another player or PDF object has the focus, that object receives a Blur event (`onBlur/afterBlur`). If the media player already has the focus, nothing happens. If the player is not open or not visible, an exception is thrown.

Example

See "Example 1" on page 165 for an example of usage.

stop

6.0			

Stops playback of the current media, if it is playing or paused, and triggers a Stop event (`onStop`/`afterStop`). The Stop event may occur during execution of the `stop` method or afterward, depending on the player. Does nothing if the media is not playing or paused.

Throws an exception if the player is not open.

After playback stops, the player sets the media position to either the beginning or end of media, depending on the player. If `MediaPlayer.play` is called after this, playback starts at the beginning of media.

triggerGetRect

6.0			

Triggers a GetRect event (see `onGetRect`) to cause a docked media player to be resized.

Example

This example is similar to the one that follows `onGetRect`. Page 0 has a series of (thumbnail-size) ScreenAnnots. Below is a typical Rendition action or mouse-up button JavaScript action, when the action is executed, the media clip is resized and played.

```
var rendition = this.media.getRendition("Clip1");
var annot = this.media.getAnnot({ nPage:0,cAnnotTitle:"ScreenClip1" });
var player = app.media.openPlayer({
   rendition: rendition,
   annot: annot,
   settings: { windowType: app.media.windowType.docked },
   events: {
      onGetRect: function (e) {
         var width = e.media.rect[2] - e.media.rect[0];
         var height = e.media.rect[3] - e.media.rect[1];
         width *= 3; // Triple width and height
         height *= 3;
         e.media.rect[0] = 36; // Move left,upper to
         e.media.rect[1] = 36; // upper left-hand corner
         e.media.rect[2] = e.media.rect[0]+width;
         e.media.rect[3] = e.media.rect[1]+height;
         return e.media.rect; // Return this
      }
   }
});
player.triggerGetRect(); // trigger the onGetRec event
```

where

6.0			

Reports the current media's playback location in a `MediaOffset` object. This object contains either a time or frame property, depending on the media player and media type.

Throws an exception if the player is not open or if the player does not support `where`.

Returns

`MediaOffset` object

Example

Obtain the playback location in seconds.

```
// This code assumes that the player supports where() using time.
var where = player.where();
var seconds = where.time;
```

Obtain the chapter (marker).

```
var marker = player.markers.get({ time: seconds });
var name = marker ? marker.name : "no marker";
```

MediaReject

A MediaReject provides information about a Rendition that was rejected by a `Rendition.select` call. It includes a reference to the original Rendition along with the reason why it was rejected. In a `MediaSelection` object returned by `select`, `MediaSelection.rejects` is an array of MediaReject objects.

MediaReject properties

rendition

6.0			

A reference to the Rendition that was rejected in a `select` call.

Type

`Rendition` object

Access

R

Example

Get a list of rejected renditions. The script is executed as a Rendition action.

```
selection = event.action.rendition.select(true);
for ( var i=0; i<selection.rejects.length; i++)
   console.println("Rejected Renditions: "
      + selection.rejects[i].rendition.uiName);

// Now play the first available rendition.
console.println( "Preparing to play " + selection.rendition.uiName);
var settings = selection.rendition.getPlaySettings();
var args = {
   rendition: selection.rendition,
   annot: this.media.getAnnot({ nPage: 0, cAnnotTitle: "myScreen" }),
   settings: settings
};
app.media.openPlayer(args);
```

MediaSelection

The `Rendition.select` method returns a MediaSelection object that can be used to create a `MediaSettings` object for playback.

MediaSelection properties

selectContext

6.0			

A value that can be used to write a loop that calls `Rendition.select` repeatedly to do a customized selection based on any criteria that you can test in JavaScript code.

Type

Object

Access

R

Example

Generic script for using selectContext.

```
function MyTestSelection( selection )
{
   // This function should test the selection as you wish and return
   // true to use it or false to reject it and try another one.
}
function MyGetSelection( rendition )
{
   var selection;
   for( selection = rendition.select(); selection;
      selection = rendition.select
         ({ oContext: selection.selectContext }))
   {
      if( MyTestSelection( selection ) )
         break;
   }
   return selection;
}
```

players

6.0			

An array of strings identifying the media players that may be used to play `MediaSelection.rendition`. Both the players and rendition properties are `null` if no playable rendition is found.

Type

Array of String

Access

R

Example

Get a list of the players that will play the selected rendition. The code below assumes execution as a Rendition action.

```
var selection = event.action.rendition.select();
for ( var o in selection.players )
   console.println( selection.players[o].id );
```

rejects

6.0			

An array of `MediaReject` objects. These are the Renditions that were rejected by the `Rendition.select` call that returned this MediaSelection. See `MediaReject` object for details.

Type

Array of `MediaReject` objects

Access

R

Example

See the "Example" on page 517.

rendition

6.0			

The selected rendition, or `null` if none was playable.

Type

`Rendition` object

Access

R

Example

Get the name of the selected rendition. This script is executed from a Rendition action event.

```
var selection = event.action.rendition.select();
console.println( "Preparing to play " + selection.rendition.uiName);
```

MediaSettings

A MediaSettings object contains settings required to create and open a MediaPlayer. It is the value of the `settings` property of the `MediaPlayer` object. Many of these settings have default values, but some are required depending on the type of player being opened and depending on other settings. See the notes for each MediaSettings property for details.

Acrobat and the various media players will attempt to use these settings, but there is no guarantee that they will all be honored. (For example, very few players honor the `palindrome` setting.)

MediaSettings properties

autoPlay

6.0			

Specifies whether the media clip should begin playing automatically after the player is opened. If you set `autoPlay` to `false`, use `MediaPlayer.play` to begin playback. The default value is `true`.

Type

Boolean

Access

R/W

Example

See the examples following `afterReady` and `players`.

baseURL

6.0			

The base URL to be used to resolve any relative URLs used in the media clip, for example, if the media opens a web page. There is no default value; if baseURL is not specified, the interpretation of a relative URL will vary depending the media player, but in most cases will not work.

Type

String

Access

R/W

bgColor

6.0			

The background color for the media player window. The array may be in any of the color array formats supported by JavaScript for Acrobat.

If bgColor is not specified, the default value depends on the window type:

`Docked` — White

`Floating` — The window background color specified in the operating system control panel

`Full Screen` — The full screen background color specified in the user's Acrobat preferences

Type

Color Array

Access

R/W

Example

```
// Red background
settings.bgColor = [ "RGB", 1, 0, 0 ];
```

bgOpacity

6.0			

The background opacity for the media player window. The value may range from 0.0 (fully transparent) to 1.0 (fully opaque). The default value is 1.0.

Type

Number

Access

R/W

data

6.0			

An object, often referred to as a *MediaData object*, that a media player can use to read its media clip data, whether from an external file or embedded in the PDF. The contents of this object are not directly usable from JavaScript.

This object can be obtained from `app.media.getAltTextData`, `app.media.getURLData`, or indirectly by `Rendition.getPlaySettings`. The `data` object may be bound to the rendition's document, so it may become unavailable if the document is closed.

Type

Object

Access

R/W

Example

See the examples that follow `app.media.getURLData`

duration

6.0			

The amount of time in seconds that playback will take. If not specified, the default is to play the entire media, or the amount of time between the `startAt` and `endAt` points if either of those is specified.

Note that the duration may be longer than the entire media length or the difference between the `startAt` and `endAt` points. In that case, playback continues to the end of media or to the `endAt` point and then playback pauses at that location until the duration elapses.

Type

Number

Access

R/W

Example

Play a floating window with infinite duration. The playback location (from the UI) of the rendition is a floating window. The code below is executed from a form button. The floating window remains open after the player has reached the end of the media. To avoid stacked floating windows, the player is closed before reopening it.

If this script is executed from a Rendition action, the rendition can be specified through the UI and closing the player would not be necessary.

```
var rendition = this.media.getRendition("Clip");
if ( player && player.isOpen )
   try { player.close(app.media.closeReason.done); } catch(e) {};
var player = app.media.openPlayer({
   rendition: rendition,
   settings: { duration: Infinity }
});
```

endAt

6.0			

The ending time or frame for playback. This may be an absolute time or frame value, or a marker name, or a marker plus a time or frame, as described under `MediaOffset` object. Playback ends at the specified time or frame, or as close to that point as the media player is able to stop. If `endAt` is not specified, the default value is the end of media.

See also `startAt`.

Type

`MediaOffset` object

Access

R/W

Example

The following script plays an audio clip beginning 3 seconds into the media to 8 seconds into the media.

```
var player = app.media.openPlayer({
   rendition: this.media.getRendition( "myAudio" ),
   doc: this,
   settings: {
      startAt: 3,
      endAt: 8
   }
});
```

floating

6.0			

An object containing properties (listed below) that define the location and style of a floating window.

This object is ignored unless `MediaSettings.windowType` has a value of `app.media.windowType.floating`.

Defaults are used for all the floating settings if they are not specified.

Property	Type	Description
`align`	Number	Specifies how the floating window is to be positioned relative to the window specified by the over property. The value of `align` is one of the values of `app.media.align`.
`over`	Number	Specifies the window to which the floating window is to be aligned. The value of `over` is one of the values of `app.media.over`.
`canResize`	Number	Specifies whether the floating window may be resized by the user. The value of `canResize` is one of the values of `app.media.canResize`.
`hasClose`	Boolean	If `true`, the floating window should have a close window control button.
`hasTitle`	Boolean	If `true`, a title should be displayed in the title bar.
`title`	String	This title to be displayed if `hasTitle` is `true`.
`ifOffScreen`	Number	Specifies what action should be taken if the floating window is positioned totally or partially offscreen. The value of ifOffScreen is one of the values of `app.media.ifOffScreen`.
`rect`	Array of four Numbers	An array of screen coordinates specifying the location and size of the floating window. Required if `width` and `height` are not given.
`width`	Number	The width of the floating window. Required if `rect` is not given.
`height`	Number	The height of the floating window. Required if `rect` is not given.

Type

Object

Access

R/W

Example

Play a media clip in a floating window.

```
var rendition = this.media.getRendition( "myClip" );
var floating = {
   align: app.media.align.topCenter,
   over: app.media.over.appWindow,
   canResize: app.media.canResize.no,
   hasClose: true,
   hasTitle: true,
   title: rendition.altText,
   ifOffScreen: app.media.ifOffScreen.forceOnScreen,
   width: 400,
   height: 300
};
var player = app.media.openPlayer({
   rendition: rendition,
   settings: {
      windowType: app.media.windowType.floating,
      floating: floating
   }
});
```

layout

6.0			

A value chosen from the `app.media.layout` enumeration, which defines whether and how the content should be resized to fit the window. The default value varies with different media players.

Type

Number

Access

R/W

monitor

6.0			

For a full screen media player, this property determines which display monitor will be used for playback. This may be either a `Monitor` object or a `Monitors` object. If it is an array, the first element (which is a Monitor object) is used.

Type

Monitor or Monitors object

Note: Only the `rect` property `MediaSettings.monitor.`**`rect`** (in the case of a Monitor object) or `MediaSettings.monitor[0].`**`rect`** (for a Monitors object) is used for playback.

See `monitorType` (below) for a discussion of the relationship between the `monitor` and `monitorType` properties.

Access

R/W

Example

Play a media clip in full screen from a form button.

```
var player = app.media.openPlayer({
   rendition: this.media.getRendition("Clip"),
   settings: {
      monitor: app.monitors.primary(),
      windowType: app.media.windowType.fullScreen,
   }
});
```

Note: The user trust manager settings must allow full screen play back.

monitorType

6.0			

An `app.media.monitorType` value that represents the type of monitor to be selected for playback for a floating or full screen window.

Note the difference between the `monitor` and `monitorType` properties:

- `monitor` specifies a specific monitor on the current system by defining its rectangle.
- `monitorType` specifies a general category of monitor based on attributes such as primary, secondary, and best color depth.

A PDF file that does not use JavaScript cannot specify a particular monitor, but it can specify a monitor type. When `monitorType` is specified in a call to `app.media.createPlayer` or `app.media.openPlayer`, JavaScript code gets the list of monitors available on the system and uses `monitorType` to select one of the monitors for playback. The monitor rectangle is then used when `MediaPlayer.open` is called to select the monitor.

Type

Number

Access

R/W

Example

Play a media clip in full screen on a monitor with the best color depth.

```
var player = app.media.openPlayer({
   rendition: this.media.getRendition("Clip"),
   settings: {
      monitorType: app.media.monitorType.bestColor,
      windowType: app.media.windowType.fullScreen,
   }
});
```

page

6.0			

For a docked media player, this property is the number of the page on which the player should be docked. For other types of media players, this property is ignored.

See also `MediaPlayer.page`.

Type

Number

Access

R/W

palindrome

6.0			

If this property is `true`, the media plays once normally and then plays in reverse back to the beginning. If `repeat` is specified, this forward-and-reverse playback repeats that many times. Each complete forward and reverse playback counts as one repeat.

The default value is `false`.

Type

Boolean

Access

R/W

Note: Most media players do not support palindrome and ignore this setting.

Example

Use QuickTime, which supports palindrome, to view the media clip.

```
var playerList = app.media.getPlayers().select({ id: /quicktime/i });
var settings = { players: playerList, palindrome: true };
var player = app.media.openPlayer({ settings: settings });
```

The above code should be run within a Rendition action event with an associated rendition.

players

6.0			

An array of objects that represent the media players that can be used to play this rendition. JavaScript code does not usually access this array directly but passes it through from `Rendition.select` to the `settings` object for `app.media.createPlayer`.

Type

Players or Array of String

Access

R/W

Example

List the available players that can play this rendition. This script is run as a Rendition action with associated rendition.

```
var player = app.media.openPlayer({ settings: {autoPlay: false} });
console.println("players: " + player.settings.players.toSource() );

// Sample output to the console:
players: [{id:"vnd.adobe.swname:ADBE_MCI", rank:0},
{id:"vnd.adobe.swname:AAPL_QuickTime", rank:0},
{id:"vnd.adobe.swname:RNWK_RealPlayer", rank:0},
{id:"vnd.adobe.swname:MSFT_WindowsMediaPlayer", rank:0}]
```

rate

6.0			

A number that specifies the playback rate. The default value is 1, which means normal playback. Other values are relative to normal speed. For example, .5 is half speed, 2 is double speed, and -1 is normal speed in reverse.

Many players and media types are limited in the values they support for rate and will choose the closest playback rate that they support.

Type

Number

Access

R/W

Example

Play a media clip at double speed. This script is executed as a Rendition action.

```
var player = app.media.createPlayer();
player.settings.rate = 2;
player.open();
```

repeat

6.0			

The number of times the media playback should automatically repeat. The default value of 1 causes the media to be played once.

Many players support only integer values for repeat, but some allow non-integer values such as 1.5. A value of `Infinity` plays the media clip continuously.

The default value is 1.

Type

Number

Access

R/W

Example

Play a media clip from a Rendition action continuously.

```
var player = app.media.openPlayer({settings: { repeat: Infinity } });
```

showUI

6.0			

A Boolean value that specifies whether the controls of the media player should be visible or not.

The default value is `false`.

Type

Boolean

Access

R/W

Example

Show the controls of the media player. This script is executed as a Rendition action.

```
var player = app.media.createPlayer();
player.settings.showUI = true;
player.open();
```

or

```
app.media.openPlayer( {settings: {showUI: true} });
```

startAt

6.0			

Defines the starting time or frame for playback. This may be an absolute time or frame value, or a marker name, or a marker plus a time or frame, as described under MediaOffset. Playback starts at the specified time or frame, or as close to that point as the media player is able to stop. If startAt is not specified, the default value is the beginning of media.

See also `endAt`.

Type

`MediaOffset` object

Access

R/W

Example

See the example that follows `endAt`.

visible

6.0			

A Boolean value that specifies whether the player should be visible.

The default value is `true`.

Type

Boolean

Access

R/W

Example

Set a docked media clip to play audio only. The script is executed as a Rendition action.

```
   var args = {
      settings: {
         visible: false,
         windowType: app.media.windowType.docked
      }
   };
app.media.openPlayer( args );
```

See also `MediaPlayer.visible`.

volume

6.0			

Specifies the playback volume. A value of 0 is muted, a value of 100 is normal (full) volume; values in between are intermediate volumes. Future media players may allow values greater than 100 to indicate louder than normal volume, but none currently do.

The default value is 100.

Type

Number

Access

R/W

windowType

6.0			

A value, chosen from the `app.media.windowType` enumeration, that defines what type of window the MediaPlayer should be created in.

If you use the low-level function `doc.media.newPlayer`, the default value for `windowType` is `app.media.windowType.docked`.

If you use the higher-level `createPlayer` or `openPlayer` functions of the `app.media` object, the default value is determined as follows:

- If an `annot` is provided (see the description of the PlayerArgs object), the default is `app.media.windowType.docked`.
- If a `settings.floating` object is provided (see the description of the PlayerArgs object), the default is `app.media.windowType.floating`.
- Otherwise, the default is undefined.

Type

Number

Access

R/W

Example

Create media players with different window types. Script is executed as a Rendition action, so the selection of the specification of the rendition is not needed.

```
// Docked player that will be played in the associated ScreenAnnot
app.media.openPlayer({
   settings: { windowType: app.media.windowType.docked }
});
// Play in full screen mode, see also monitor and monitorType
app.media.openPlayer({
   settings: { windowType: app.media.windowType.fullScreen }
});
// Show the media clip in a floating window, also, see the floating property
var args = {
   settings: {
      windowType: app.media.windowType.floating,
      floating: {
         title: "A. C. Robat",
         width: 352,
         height: 240,
      }
   }
};
app.media.openPlayer( args );
```

Monitor

A Monitor object represents an individual display monitor. A Monitor object can be obtained from `app.monitors`, which returns an array of all monitors connected to the system. `app.monitors` is a `Monitors` object so the methods of the Monitors object can be used to select or filter out monitors from a multiple monitor system based on different criteria. See the `Monitors object` for details.

The Monitor object and the `Monitors` object are used in the MediaSettings `monitor` property.

Monitor properties

colorDepth

6.0			

The color depth of the monitor; that is, the number of bits per pixel.

Type

Number

Access

R

Example

Get the primary monitor and check its color depth. The `Monitors.primary` method is use to select the primary monitor.

```
var monitors = app.monitors.primary();
console.println( "Color depth of primary monitor is "
   + monitors[0].colorDepth );
```

isPrimary

6.0			

A Boolean value that is `true` for the primary monitor, `false` for all other monitors.

Type

Boolean

Access

R

Example

Get the widest monitor and determine if it is the primary monitor.

```
var monitors = app.monitors.widest();
var isIsNot = (monitors[0].isPrimary) ? "is" : "is not";
console.println("The widest monitor "+isIsNot+" the primary monitor.");
```

rect

6.0			

A rectangle specifying the boundaries of the monitor in virtual desktop coordinates:

- The origin of the virtual desktop is the top left corner of the primary monitor. Therefore, the primary monitor's bounds are always in the form [0, 0, right, bottom].
- Secondary monitors may have positive or negative values in their bounds arrays, depending on where they are positioned relative to the primary monitor.

Type

Rectangle

Access

R

workRect

6.0			

A rectangle representing a monitor's workspace boundaries in virtual desktop coordinates. See `rect` for information about these coordinates.

The workspace is the area of a monitor that is normally used for applications, omitting any items such as docked toolbars or taskbars. For example, running Windows on a single 800x600 display, `rect` is [0, 0, 800, 600]. With a standard Windows taskbar 30 pixels high and always visible at the bottom of the screen, `workRect` is [0, 0, 800, 570].

Type

Rectangle

Access

R

Monitors

A Monitors object is equivalent to a read-only array of `Monitor` objects, each one representing a single monitor. Elements can be accessed using the usual array notation and the `length` property.

The `app.monitors` property returns a Monitors object that includes every monitor connected to the user's system. JavaScript code can loop through this array to get information about the available monitors and select one for a full screen or pop-up media player.

Note: The Monitors object returned by `app.monitors` is unsorted (the monitors are not listed in any particular order).

The Monitors object has a number of filter methods that select one or more monitors based on various criteria. All of the monitor selection options provided in the PDF file format are implemented as calls to these filter methods.

None of the filter methods modify the original Monitors object. They each return a new Monitors object, which normally contains one or more Monitor objects. If a single monitor matches the filtering criterion better than any other, the result Monitors object contains that monitor. If more than one monitor satisfies the filtering criterion equally (for example, for the `bestColor` method, if more than one monitor has the same greatest color depth), the result contains all of those monitors.

Several of the filter methods have an optional minimum or required parameter. If this parameter is specified and no monitor meets that minimum requirement, the result Monitors object is empty. Otherwise, if the original Monitors object was not empty, the result always contains at least one monitor.

Wherever a filter method refers to height, width, or area, the dimensions are in pixels.

Example

```
var monitors = app.monitors;
for ( var i = 0; i< monitors.length; i++)
console.println("monitors["+i+"].colorDepth = "+monitors[i].colorDepth);
```

`Monitors.length` contains the number of elements in the Monitors object. For the Monitors object returned by `app.monitors`, this is the number of monitors in the user's system. For a Monitors object returned by one of the filter methods, this number may be smaller.

Monitors methods

bestColor

6.0			

Returns a copy of the `Monitors` object, filtered to include the monitor or monitors with the greatest color depth.

If `nMinColor` is specified, returns an empty Monitors array if the best color depth is less than `nMinColor`.

Parameters

`nMinColor`	(optional) The minimal color depth required for the monitor.

Returns

A `Monitors` object

Example

```
var monitors = app.monitors.bestColor(32);
if (monitors.length == 0 )
   console.println("Cannot find the required monitor.”);
else
   console.println("Found at least one monitor.");
```

bestFit

6.0			

Returns a copy of the `Monitors` object, filtered to include only the smallest monitor or monitors with at least the specified `nWidth` and `nHeight` in pixels.

Parameters

`nWidth`	Minimum width of the best fit monitor.
`nHeight`	Minimum height of the best fit monitor.
`bRequire`	(optional) Specifies what to return if no monitors have at least the specified width and height. If `true`, the method returns an empty Monitors array. If `false` or omitted, a Monitors array containing the largest monitor or monitors is returned.

Returns

A `Monitors` object

desktop

6.0			

Creates a new `Monitors` object containing one `Monitor` object that represents the entire virtual desktop. The `rect` property is the union of every `rect` in the original Monitors object, the `workRect` property is the union of every `workRect` in the original Monitors object, and `colorDepth` is the minimum `colorDepth` value found in the original Monitors object.

Returns

A `Monitors` object

Note: The `desktop` method is normally called directly on a Monitors object returned by `app.monitors`. If that Monitors object is first filtered by any of its other methods, the `desktop` method does the same calculations listed above with that subset of the monitors.

document

6.0			

Returns a copy of the `Monitors` object, filtered to include the monitor or monitors that display the greatest amount of the document, as specified by the Doc parameter `doc`.

If the document does not appear on any of the monitors in the original Monitors object, the method returns an empty Monitors array if `bRequire` is `true` or a Monitors array containing at least one arbitrarily chosen monitor from the original array if `bRequire` is `false` or omitted.

Parameters

`doc`	The Doc of the document
`bRequire`	(optional) A Boolean value. See the description above.

Returns

A `Monitors` object

filter

6.0			

Returns a copy of the `Monitors` object, filtered by calling a ranker function for each monitor in the list. The ranker function takes a Monitor parameter and returns a numeric rank. The return value from `filter` is a Monitors array containing the monitors that had the highest rank (either a single monitor, or more than one if there was a tie).

Parameters

`fnRanker`	A (ranker) function that takes a Monitor parameter and returns a numeric rank
`nMinRank`	(optional) If `nMinRank` is undefined, `filter` always includes at least one monitor from the original list (unless the original list was empty). If `nMinRank` is specified, `filter` returns an empty Monitors array if no monitors had at least that rank according to the ranker function.

Returns

A `Monitors` object

Note: Most of the other Monitors filtering functions are implemented as `filter` calls.

Example

This script implements `Monitors.bestColor( minColor)`. It returns a `Monitors` object containing the monitor or monitors that have the greatest color depth. If `minColor` is specified, returns an empty Monitors array if the best color depth is less than `minColor`.

```
bestColor: function( minColor )
{
   return this.filter(
      function( m ) { return m.colorDepth; }, minColor );
}
```

largest

6.0			

Returns a copy of the `Monitors` object, filtered to include the monitor or monitors with the greatest area in pixels.

Parameters

`nMinArea`	(optional) If the optional parameter `nMinArea`, a number, is specified, `largest()` returns an empty Monitors array if that greatest area is less than that value.

Returns

A `Monitors` object

leastOverlap

6.0			

Returns a copy of the `Monitors` object, filtered to include the monitor or monitors that contain the smallest amount of the rectangle, as specified by the `rect` parameter.

Parameters

`rect`	A rectangle, an array of four numbers in screen coordinates.
`maxOverlapArea`	(optional) If `maxOverlapArea` is specified, the result Monitors array contains only those monitors that contain at least that much area of the rectangle, or an empty Monitors array if no monitors contain that much area of the rectangle.

Returns

A `Monitors` object

mostOverlap

6.0			

Returns a copy of the `Monitors` object, filtered to include the monitor or monitors that contain the largest amount of the rectangle, as specified by the `rect` parameter.

If there is no monitor with at least that much overlapping area, the method returns an empty Monitors array if `minOverlapArea` is specified, or a Monitors array containing at least one arbitrarily chosen monitor from the original array if `minOverlapArea` is omitted.

Parameters

`rect`	A rectangle, an array of four numbers in screen coordinates.
`minOverlapArea`	(optional) A Boolean value; see description above.

Returns

A `Monitors` object

nonDocument

6.0			

Returns a copy of the `Monitors` object, filtered to include the monitor or monitors that display none of, or the least amount of, the document.

Parameters

`doc`	The Doc of the target document
`bRequire`	(optional) `bRequire` is a Boolean value that determines the return value when there is no monitor that is completely clear of the document. If `true`, `nonDocument` returns an empty, or if false or omitted, `nonDocument` returns a Monitors array containing at least one arbitrarily chosen monitor from the original Monitors array.

Returns

A `Monitors` object

primary

6.0			

Returns a copy of the `Monitors` object, filtered by removing all secondary monitors, leaving only the primary monitor if it was present in the original list.

If the primary monitor was not present in the original list, returns a Monitors array containing at least one arbitrarily chosen monitor from the original list.

Returns

A `Monitors` object

Example

Get the primary monitor and check its color depth.

```
var monitors = app.monitors.primary();
// Recall that each element in a monitors object is a monitor object
// This code uses monitor.colorDepth
console.println( "Color depth of primary monitor is "
   + monitors[0].colorDepth );
```

secondary

6.0			

Returns a copy of the `Monitors` object, filtered by removing the primary monitor, returning only secondary monitors.

If the original `Monitors` object contained only the primary monitor and no secondary monitors, returns the original list.

Returns

A `Monitors` object

select

6.0			

Returns a copy of the `Monitors` object, filtered according `nMonitor`, a monitor selection value as used in PDF and enumerated in `app.media.monitorType`.

The `doc` is required when `nMonitor` is `app.media.monitorType.document` or `app.media.monitorType.nonDocument` and ignored for all other `nMonitor` values.

These selection values correspond directly to the various Monitors filter methods. `select` calls the corresponding filter method and then, in most cases, also filters with `primary` as a tie-breaker in case more than one monitor matches the main filter.

Parameters

`nMonitor`	The monitor type, a number from `app.media.monitorType`.
`doc`	A Doc. The parameter is required if `nMonitor` is either `app.media.monitorType.document` or `app.media.monitorType.nonDocument`, ignored otherwise.

Returns

A `Monitors` object.

Example

These two equivalent methods are for filtering monitors.

```
settings.monitor =
app.monitors().select( app.media.monitorType.document, doc );
settings.monitor = app.monitors().document(doc).primary();
```

tallest

6.0			

Returns a copy of the `Monitors` object, filtered to include only the monitor or monitors with the greatest height in pixels.

Parameters

`nMinHeight`	(optional) If `nMinHeight` is specified and no monitor has at least that height, the return value is an empty Monitors array.

Returns

A `Monitors` object

widest

6.0			

Returns a copy of the `Monitors` object, filtered to include only the monitor or monitors with the greatest width in pixels.

Parameters

`nMinWidth`	(optional) If nMinWidth is specified and no monitor has at least that width, the return value is an empty Monitors array.

Returns

A `Monitors` object

Net

The `Net` object allows for the discovery and access to networking services through a variety of protocols.

The `Net` object forms a namespace for the networking services that currently exist in the global namespace (SOAP). The existing objects will be maintained for backwards-compatibility however any new services should use the new namespace.

Net properties

SOAP

8.0			

The `Net.SOAP` object allows for communication with network services that use the SOAP Messaging Protocol. The `Net.SOAP` object has one property and three methods, full documentation is found on the referenced pages.

Name	Short Description	Page
Net.SOAP properties		
`wireDump`	If `true`, synchronous SOAP requests will cause the XML Request and Response to be dumped to the JavaScript Console. This is useful for debugging SOAP problems.	page 657
Net.SOAP methods		
`connect`	Converts the URL of a WSDL document to a JavaScript object with callable methods corresponding to the web service.	page 657
`request`	Initiates a remote procedure call (RPC) or sends an XML message to a SOAP HTTP endpoint. The method either waits for the endpoint to reply (synchronous processing) or calls a method on the notification object (asynchronous processing).	page 664
`response`	Initiates a remote procedure call (RPC) or sends an XML message to a SOAP HTTP endpoint without waiting for a reply.	page 672

Type

Object

Access

R

Discovery

8.0			

The `Discovery` object allows for the dynamic discovery of network services. The `Net.Discovery` object has two methods, full documentation is found on the referenced pages.

Net.Discovery method	Short Description	Page
`queryServices`	Locates network services that have published themselves using DNS Service Discovery (DNS-SD).	page 660
`resolveService`	Allows a service name to be bound to a network address and port in order for a connection to be made.	page 662

Type

Object

Access

R

HTTP

8.0			

The `Net.HTTP` object allows access to web services that use HTTP. These methods allow communication with a wider variety of services than the `Net.SOAP` object. The `HTTP` object can be used to implement any messaging protocol that utilizes HTTP, for example, WebDAV or the ATOM Publishing Protocol.

See Net.HTTP, page 548, full documentation of the methods of the `HTTP` object.

Type

Object

Access

R

Net methods

The `Net` object has three methods, full documentation is found on the referenced pages.

Net method	Short Description	Page
`streamDecode`	Allows a stream object to be decoded with the specified encoding type.	page 673
`streamDigest`	Allows a stream object to be digested with the specified encoding type.	page 674
`streamEncode`	Encodes a stream object.	page 674

Net.HTTP

The `Net.HTTP` object allows access to web services that use HTTP. These methods allow communication with a wider variety of services than the `Net.SOAP` object. The `HTTP` object can be used to implement any messaging protocol that utilizes HTTP, for example, WebDAV or the ATOM Publishing Protocol.

Net.HTTP methods

request

8.0		S	F

The `request` method asynchronously invokes an HTTP Web Service. This method allows connecting to a wider set of web services than the `Net.SOAP.request` (`SOAP.request`) method and with finer control over the HTTP method, headers and / or body. This method allows the creation of more complicated networking protocols such as WebDAV or the Atom Publishing Protocol.

Note: This method can only be made outside the context of a document (for example, in a folder level JavaScript).

Parameters

`cVerb` — A string that specifies the HTTP verb to use. The verb must be one of the following:

Messaging protocol	Parameter value
HTTP (RFC 1945, 2616)	`GET`, `POST`, `PUT`, `DELETE`, `OPTIONS`, `HEAD`
WebDAV (RFC 2518)	`PROPFIND`, `PROPPATCH`, `MKCOL`, `LOCK`, `UNLOCK`, `COPY`, `MOVE`, `ACL`, `SEARCH`
WebDAV Versioning Extensions (RFC 3253)	`CHECKIN`, `CHECKOUT`, `UNCHECKOUT`, `MERGE`, `VERSION-CONTROL`, `REPORT`, `KWORKSPACE`, `UPDATE`, `LABEL`, `MERGE`, `MKACTIVITY`
CalDAV Calendaring Extensions	`MKCALENDAR`

`cURL` — A string that specifies the network endpoint location of the web service to connect to. The scheme of the URL *must* be either HTTP or HTTPS.

`aHeaders` (optional) An array that specifies HTTP headers to be sent with the request. Some headers such as Content-length cannot be set explicitly. Each element in the array is an object describing the header with the following properties:

Property	Description
`name`	The name of the header to use, this *must* be a valid HTTP Header name.
`value`	The value for the HTTP header, this *must* be a valid HTTP Header value string.

`oRequest` (optional) A Stream object that specifies the request body of the method. No encoding of the message body is done prior to sending it.

`oHandler` (optional) An object that handles the response from the service. The `oHandler` object will have the response method invoked with the following parameters:

Parameter	Description
`oRequest`	The response body as a stream object on success.
`cURL`	The request URL that was used when this request was invoked.
`oException`	An exception object if the method was not successful. The exception object has the following properties: **`error`** — the HTTP status code that was returned. **`msg`** — An error message associated with the failure.
`aHeaders`	An array of response headers returned from the server. See the `aHeaders` parameter of the `Net.HTTP.request` method for a description of the format.

`oAuthenticate` (optional) An object that specifies how to handle HTTP authentication or specifies credentials to use. The default is to present a user interface to the user to handle HTTP authentication challenges for BASIC and DIGEST authentication modes. The `oAuthenticate` object can have the following properties:

Property	Description
`Username`	A string containing the username to use for authentication.
`Password`	A string containing the authentication credential to use.
`UsePlatformAuth`	A Boolean indicating that platform authentication should be used. If platform authentication is enabled, the `Username` and `Password` are ignored and the underlying platform networking code is used. This may cause an authentication UI to be shown to the user and/or the credentials of the currently logged in user to be used. The default is `false` and is only supported on the Windows platform.

Exceptions

The method throws an exception if the URL is invalid or the same, origin requirement is not satisfied.

Example

Create a collection at the URL specified.

```
CreateWebDAVCollection = function(cURL)
{
    var params =
    {
        cVerb: "MKCOL",
        cURL: cURL,
        oHandler:
        {
          response: function(msg, uri, e)
           {
               // HTTP 405 - Can't MKCOL if it exists!
               if(e != undefined && e.error != 405) {
                   app.alert("Failed to MKCOL: "+ e);
               } else app.alert("Created collection");
           }
        }
    };
    Net.HTTP.request(params);
} // CreateWebDAVCollection
```

OCG

An OCG object represents an *optional content group* in a PDF file. Content in the file can belong to one or more optional content groups. Content belonging to one or more OCGs is referred to as optional content and its visibility is determined by the states (ON or OFF) of the OCGs to which it belongs. In the simplest case, optional content belongs to a single OCG, with the content being visible when the OCG is on and hidden when the OCG is off. More advanced visibility behavior can be achieved by using multiple OCGs and different visibility mappings.

Use the Doc `getOCGs` method to get an array of OCG objects for a PDF document.

The Doc methods `addWatermarkFromFile` and `addWatermarkFromText` add watermarks in an OCG.

See the *PDF Reference* version 1.7 for additional details on optional content groups.

OCG properties

constants

7.0			

Each instance of an OCG object inherits this property, which is a wrapper object for holding various constant values.

intents Object

An OCG's intent array can contain arbitrary strings, but those contained in this object are the only ones recognized by Acrobat.

Property	Description
`design`	Designates a design intent in an OCG object.
`view`	Designates a view intent in an OCG object.

states Object

The `states` object is used to set the initial state of the OCG (see `initState`).

Property	Description
`on`	Designates an OCG state of ON.
`off`	Designates an OCG state of OFF.

initState

7.0	D		

This property is used to determine whether this OCG is on or off by default. See the states Object for possible values.

Type

Boolean

Access

R/W (Adobe Reader: R only)

Example

Set an initial state of an OCG to off.

```
var ocgs = this.getOCGs();
ocgs[0].initState.constants.states.off;
```

locked

7.0	D		

This property is used to determine whether this OCG is locked. If an OCG is locked, its on/off state cannot be toggled through the UI.

Type

Boolean

Access

R/W (Adobe Reader: R only)

name

6.0	D		

The text string seen in the UI for this OCG. It can be used to identify OCGs, although it is not necessarily unique.

Note: In Acrobat 6.0, the `name` is read-only; for Acrobat 7.0, it is read/write.

Type

String

Access

R/W (Adobe Reader: R only)

Example

A function that toggle all Watermark OCGs.

```
function ToggleWatermark(doc)
{
   var ocgArray = doc.getOCGs();
   for (var i=0; i < ocgArray.length; i++) {
      if (ocgArray[i].name == "Watermark") {
         ocgArray[i].state = !ocgArray[i].state;
      }
   }
}
```

state

6.0			

Represents the current on/off state of this OCG.

Changing the state of an OCG does not dirty the document, the OCGs revert to their initial state when the document is loaded again.

Type

Boolean

Access

R/W

Example

Turn on all the OCGs in the given document.

```
function TurnOnOCGsForDoc(doc)
{
   var ocgArray = doc.getOCGs();
   for (var i=0; i < ocgArray.length; i++)
      ocgArray[i].state = true;
}
```

OCG methods

getIntent

7.0			

Returns this OCG's intent array.

An OCG will affect the visibility of content only if it has `onstants.intents.view` as an intent.

See also `setIntent` and the intents Object.

Returns

An array of strings. See constants.intents for possible values.

setAction

6.0			✖

Registers a JavaScript expression to be evaluated after every state change for this OCG.

Setting an action for an OCG does not dirty the document, therefore, the assignment of action must be made when the document is first opened, as document level script, or dynamically through user interaction.

Note: This method will overwrite any action already defined for this OCG.

Parameters

`cExpr`	The expression to be evaluated after the OCG state changes.

Example

The function below is used to assign a beep sound to an OCG passed to it. The script that follows the function definition assigns a beeping action to the first OCG, as listed in the array returned by the `getOCGs` method.

```
/* Beep when the given ocg is changed */
function BeepOnChange(ocg)
{
   ocg.setAction("app.beep()");
}
var ocgs = this.getOCGs();
BeepOnChange(ocgs[0]);
```

setIntent

7.0	D		X

Sets this OCG's intent array. An OCG should only affect the visibility of content if this array contains constants.intents.view. See the intents Object for possible values.

See also `getIntent` and the intents Object.

Parameters

`aIntentArray`	An array of strings to be used as this OCG's intent array.

Example

Set the intent of all OCGs in the document to both View and Design.

```
var ocgs = this.getOCGs();
for (i=0; i < ocgs.length; i++) {
   ocgs[i].setIntent( [ocgs[i].constants.intents.view,
   ocgs[i].constants.intents.design]);
}
```

PlayerInfo

A PlayerInfo object represents a media player that is available for media playback. The `app.media.getPlayers` method returns a `PlayerInfoList` object, which is a collection of PlayerInfo objects.

PlayerInfo properties

id

6.0			

Represents a media player plug-in and associated media player. This string is not localized and is not intended for display to the user. This string may be used in the `MediaPlayer.settings.players` array when creating a MediaPlayer, and it is also found in the `MediaPlayer.id property` after opening a player.

Type

String

Access

R

Example

List player information for all media players that play "video/mpeg".

```
var playerInfoList = app.media.getPlayers("video/mpeg");

for ( var i=0; i < playerInfoList.length; i++) {
   console.println("id: " + playerInfoList[i].id)
   console.println("name: " + playerInfoList[i].name)
   console.println("version: " + playerInfoList[i].version)
}
```

mimeTypes

6.0			

An array of strings listing the MIME types that this media player supports.

Type

Array of String

Access

R

Example

```
var qtinfo = app.media.getPlayers().select({id: /quicktime/i })[0];
console.println( qtinfo.mimeTypes );
```

name

6.0			

The name of the media player. This string is localized according to the current language as found in app.language. It is suitable for display in list boxes and the like, but not for direct comparisons in JavaScript code.

Type

String

Access

R

version

6.0			

A string containing the version number of the media player. For most players, it is the version number of the underlying media player that is installed on the user's system. This string is in dotted decimal format, for example, 7.4.030.1170.

Type

String

Access

R

PlayerInfo methods

canPlay

6.0			

Checks to see if the media player can be used for playback, taking the user's security settings into account.

If the parameter `bRejectPlayerPrompt` is `true`, the method returns `false` if using this player would result in a security prompt. Otherwise the method returns `true` if playback is allowed either with or without a security prompt. (This method itself never triggers a security prompt, but a later attempt to create a media player may.)

Parameters

`oDoc`	A Doc
`bRejectPlayerPrompt`	A Boolean value whose default is `false`. If `true`, the method returns `false` if using this player would result in a security prompt. If `false`, the method returns `true` if playback is allowed either with or without a security prompt.

Returns

Boolean

canUseData

6.0			

Tells whether the player can use the specified data, as passed by its parameter `oData`, for playback. Returns `true` if the data can be used for playback and `false` otherwise.

Parameters

`oData`	A MediaData object (see `MediaSettings.data` for a description of this object). This object is obtained in several ways, from `app.media.getAltTextData`, `app.media.getURLData`, or indirectly by `Rendition.getPlaySettings`.

Returns

Boolean

honors

7.0			

Asks a player plug-in whether it can honor all of the settings, methods, and events listed in the `args` parameter. The answer is not guaranteed to be correct, but is a best guess without opening a media player. For example, if `args.URL` is provided, the scheme (such as `"http://"`) is checked, but `honors` does not try to actually open the URL.

Note: Compatibility: `honors` is supported only on Acrobat 7.0 and above. The Acrobat SDK provides JavaScript source code that can be copied into a PDF to provide compatibility with both Acrobat 6.0 and Acrobat 7.0. This code uses hard-coded tests for Acrobat 6.0 and calls `honors` on newer versions of Acrobat. See the `playerHonors Function` for details.

`honors` and the `HonorsArgs` object (see page 560) are similar to the MH ("must honor") entries in the PDF format, some of which can be set in the Playback Requirements panel of the Rendition Settings for a multimedia rendition. The `honors` method provides a way to choose a player that meets playback requirements dynamically in JavaScript code instead of statically in the PDF file.

Parameters

`args`	The `HonorsArgs` object to be tested. The `HonorsArgs` object is very similar to the parameter, `PlayerArgs Object`, used by the `app.media.openPlayer` method. In fact, any PlayerArgs object can be used as an HonorsArgs. HonorsArgs also allows a few other options that are used only with `honors`.

Returns

A Boolean value which is `true` if the player plug-in can honor everything in the `args` object.

Example

Play a media clip using a player that supports specific features.

```
function playWithRequirements( args )
{
   var plugins = app.media.getPlayers( args.mimeType )
   if( plugins )
   {
      for (var plugin in plugins)
      {
         if( plugin.honors(args) )
         {
            args.players = [plugin];
            return app.media.openPlayer( args );
         }
      }
   }
}
```

Play using a media player that has these capabilities for an AVI file on an http URL: It can turn off autoplay, supports the pause method, the seek method and startAt setting using a marker+time offset, and supports the Ready and Close events.

```
playWithRequirements({
   mimeType: 'video/avi',
   URL: 'http://www.example.com/bar.avi',
   settings:
   {
      autoPlay: false,
      startAt: { marker: 'test', time: 1 },
   },
   methods:
   {
      pause:[],
      seek[ { marker: 'test', time: 1 } ],
   },
   events:
   {
      afterReady: doAfterReady( e ),
      onClose: doOnClose( e ),
   },
});
```

HonorsArgs object

The HonorsArgs object lists settings, methods, and events that are used in a call to the `honors` method of the `PlayerInfo` object or the `playerHonors` function. In this discussion, `PlayerInfo.honors` refers to both.

Any `PlayersArgs` object (as used in a call to `app.media.openPlayer`) may be used as an HonorsArgs object, or an HonorsArgs object can be created to be used in a `PlayerInfo.honors` call.

If the same object is used in `app.media.openPlayer` and `PlayerInfo.honors`, be aware that the two functions interpret unknown `args` differently. `app.media.openPlayer` ignores settings or events that it does not know about, but `PlayerInfo.honors` returns `false` if there are any settings, methods, or events it does not recognize.

For example, { `settings:` { `upsideDown: true` } } would be allowed in an `app.media.openPlayer` call. There is no such setting as "upsideDown", so the setting is ignored. But in a call to `PlayerInfo.honors`, this unknown setting returns `false`.

Below is a complete list of the properties allowed in the HonorsArgs object. This illustration is loosely in the form of a JavaScript object literal, but it shows the type or description of each property instead of an actual property value:

```
args =
{
   mimeType: string,
   URL: string,
   settings:
   {
      autoPlay: boolean,
      baseURL: string,
      bgColor: Acrobat color array,
```

```
      duration: number,
      endAt: MediaOffset,
      layout: number,
      palindrome: boolean,
      rate: number,
      repeat: number,
      showUI: boolean,
      startAt: MediaOffset,
      visible: boolean,
      volume: number,
   },
   methods:
   {
      pause: [],
      play: [],
      seek: [ MediaOffset ],
      stop: [],
      where: [],
   },
   events:
   {
      Done: anything, onDone: anything, afterDone: anything,
      Error: anything, onError: anything, afterError: anything,
      Escape: anything, onEscape: anything, afterEscape: anything,
      Pause: anything, onPause: anything, afterPause: anything,
      Play: anything, onPlay: anything, afterPlay: anything,
      Ready: anything, onReady: anything, afterReady: anything,
      Script: anything, onScript: anything, afterScript: anything,
      Seek: anything, onSeek: anything, afterSeek: anything,
      Status: anything, onStatus: anything, afterStatus: anything,
      Stop: anything, onStop: anything, afterStop: anything,
   },
}
```

Additional comments on the above listing.

- The `mimeType`, `URL`, and `settings` properties are identical to the corresponding properties in PlayerArgs. The `mimeType` property is required; the `honors` method does not try to determine the MIME type from the URL's file extension. `URL` can be a real URL or a fictitious one, as long as it is in the correct URL format. See `MediaSettings` object for a description of these properties.
- The `methods` property lists the MediaPlayer methods that the player must support for the given MIME type. The value of each `methods` property is an array containing the arguments that would be passed into a call to that method. In Acrobat 7.0, the only player method that has any arguments is `seek`, which takes a single MediaOffset argument. See `MediaPlayer` object for a description of these properties.

  If you use the same object as a PlayerArgs and an HonorsArgs, it can have a `methods` property, even though a PlayerArgs normally does not have that property. Anywhere a PlayerArgs is used, the unknown property is ignored.
- The `events` property lists the events that the player must support. As shown above, each event can be named with the `on` or `after` prefix or no prefix. All three mean the same thing. If a player supports a particular on event, it always supports the corresponding `after` event (because the `after` events are

generated in the same way for all players). See EventListener object for a description of these properties.

The notation `anything` means literally that: in the HonorsArgs, these values are just placeholders. So, the events object from a PlayerArgs works in an HonorsArgs:

```
events:
{
   afterReady: doAfterReady( e ),
   onClose: doOnClose( e ),
},
```

Or, if you are creating an HonorsArgs, you can simplify the notation as follows:

```
events: { Ready: true, Close: true },
```

playerHonors Function

This function is provided as JavaScript source code that can be copied into a PDF file as a document script. It performs the same tests as the `honors` method in Acrobat 7.0, but it works on Acrobat 6.0 as well.

When running on Acrobat 6.0, `playerHonors` uses hard-coded tests that match the capabilities of the media players shipped with Acrobat 6.0.

When running on Acrobat 7.0 and later, `playerHonors` calls `honors`.

Parameters

`doc`	A Doc.
`info`	A `PlayerInfo` object.
`args`	The `HonorsArgs` object to be tested.

Returns

A Boolean value which is `true` if the player plug-in can honor everything in the `args` object.

Example

This example is the same as shown for the `honors` method of the `PlayerInfo` object, but using the `playerHonors` JavaScript function. This works on both Acrobat 6.0 and 7.0, provided a copy of the `playerHonors` source code is placed into the target PDF.

```
function playWithRequirements( args ) {
   var plugins = app.media.getPlayers( 'video/avi' )
   if( plugins ) {
      for (var plugin in plugins) {
         if( playerHonors( doc, plugin, args ) ) {
            args.players = [plugin];
            return app.media.openPlayer( args );
         }
      }
   }
}
```

PlayerInfoList

This object is equivalent to an array of `PlayerInfo` objects. The individual elements (the `PlayerInfo` objects) can be accessed using the usual array notation. The number of elements can be obtained from the `length` property.

This object is returned by the `app.media.getPlayers` method.

When a media player is created using `app.media.createPlayer`, the `settings.players` property of the `PlayerArgs` object passed to the method may contain a PlayerInfoList. The created player is restricted to those in the list.

PlayerInfoList methods

select

6.0			

Returns a copy of the PlayerInfoList, filtered to include only the players that match selection criteria. If no players match, an empty array is returned.

Parameters

`object`	(optional) An object that contains any of the properties `id`, `name`, or `version`. The values of these properties may be strings or regular expressions. Specified properties are required to match. Omitted properties can match any player.

Returns

`PlayerInfoList` object

Example 1

Use QuickTime to view the media clip.

```
var playerList = app.media.getPlayers().select({ id: /quicktime/i });
// QuickTime supports palindrome, so let's try it.
var settings = { players: playerList, palindrome: true };
var player = app.media.openPlayer({ settings: settings });
```

Example 2

Choose the Flash player by using a pattern match on its player ID.

```
var player = app.media.createPlayer();
player.settings.players = app.media.getPlayers().select({ id:/flash/i});
player.open();
```

PlugIn

5.0			

This object gives access to information about the plug-in it represents. A PlugIn object is obtained using `app.plugIns`.

PlugIn properties

certified

If `true`, the plug-in is certified by Adobe. Certified plug-ins have undergone extensive testing to ensure that breaches in application and document security do not occur. The user can configure the viewer to only load certified plug-ins.

Type

Boolean

Access

R

Example

Get the number of uncertified plug-ins.

```
var j=0; aPlugins = app.plugIns;
for (var i=0; i < aPlugins.length; i++)
  if (!aPlugins[i].certified) j++;
console.println("Report: There are "+j+" uncertified plug-ins loaded.");
```

loaded

If `true`, the plug-in was loaded.

Type

Boolean

Access

R

name

The name of the plug-in.

Type

String

Access

R

Example

Get the number of plug-ins, and list them in the console.

```
// Get an array of PlugIn Objects
var aPlugins = app.plugIns;
// Get the number of plug-ins
var nPlugins = aPlugins.length;
// Enumerate the names of all plug-ins
for (var i = 0; i < nPlugins; i++)
   console.println("Plugin \#" + i + " is " + aPlugins[i].name);
```

path

The device-independent path to the plug-in.

Type

String

Access

R

version

The version number of the plug-in. The integer part of the version number indicates the major version, and the decimal part indicates the minor and update versions. For example, 5.11 would indicate that the plug-in has major version 5, minor version 1, and update version 1.

Type

Number

Access

R

PrintParams

This is a generic object that controls printing parameters that affect any document printed using JavaScript. Changing this object does not change the user preferences or make any permanent changes to the document.

In Acrobat 6.0, the Doc `print` method takes a PrintParams object as its argument. You can obtain a PrintParams object from the Doc `getPrintParams` method. The returned object can then be modified.

Many of the PrintParams properties take integer constants as values, which you can access using the `constants` property. For example:

```
// Get the printParams object of the default printer
var pp = this.getPrintParams();
// Set some properties
pp.interactive = pp.constants.interactionLevel.automatic;
pp.colorOverride = pp.colorOverrides.mono;
// Print
this.print(pp);
```

The `constants` properties are all integers allowing read access only.

PrintParams properties

binaryOK

6.0			

`true` if a binary channel to the printer is supported. The default is `true`.

Type

Boolean

Access

R/W

bitmapDPI

6.0			ⓧ

The dots per inch (DPI) to use when producing bitmaps or rasterizing transparency. The valid range is 1 to 9600. If the document protections specify a maximum printing resolution, the lower of the two values is used. The default is 300. Illegal values are treated as 300. See also `gradientDPI`.

Type

Integer

Access

R/W

booklet

8.0			

An object used to set the parameters for booklet printing. The properties of the `booklet` object are listed in the table below.

Property	Type	Access	Description
`binding`	Integer	R/W	When printing a booklet, the `binding` property determines the paper binding direction and the page arrange order. The value of `binding` is set through the `constants bookletBindings` object, given below. The default is `Left`.
`duplexMode`	Integer	R/W	When printing a booklet, the `duplexMode` property determines the duplex printing mode. The value of `duplexMode` property is set through the `constants duplexMode` object, given below. The default is `BothSides`. When the output device doesn't support automatic duplex functionality, a manual duplex can be performed by two separated printings of front and back sides.
`subsetFrom`	Integer	R/W	When printing a booklet, `subsetFrom` determines the first booklet sheet to be printed. Independently from the general page range selection, only a subset of the final booklet result is printed by this option. Valid sheet numbers start from 0, which is the first sheet. The default value is 0. The special value of -1 represents the last sheet. More generally, the negative integer -N represents the sheet that is (N-1) from the last sheet. Thus, -2 is the sheet just before the last sheet, -3 is the sheet that is 2 sheets from the last one. See the additional note below on booklet subsetting.
`subsetTo`	Integer	R/W	When printing a booklet, `subsetTo` determines the last booklet sheet to be printed. Independently from the general page range selection, only a subset of the final booklet result is printed by this option. Valid sheet numbers start from 0, but the value -1 represents the last sheet. The default value is -1. The negative integer -N represents the sheet that is (N-1) from the last sheet. Thus, -2 is the sheet just before the last sheet, -3 is the sheet that is 2 sheets from the last one. See the additional note below on booklet subsetting.

The `bookletBindings` object has properties used to set the value of `booklet.binding`.

constants.bookletBindings object

Property	Description
`Left`	Left-side binding for Western-style left-to-right reading direction. The paper is folded on the short side.
`Right`	Right-side binding for text with right-to-left reading direction or Japanese-style vertical writing. The paper is folded on the short side.
`LeftTall`	Left-side binding for Western-style left-to-right reading direction. The paper is folded on the long side producing long and narrow pages.
`RightTall`	Right-side binding for text with right-to-left reading direction or Japanese-style vertical writing. The paper is folded on the long side producing long and narrow pages.

The `bookletDuplexMode` object has properties used to set the value of `booklet.duplexMode`.

constants.bookletDuplexMode object

Property	Description
`BothSides`	Automatically prints both sides of the paper. The selected printer must support automatic duplex printing.
`FrontSideOnly`	Only prints all pages that appear on the front side of the paper. Reinsert the printed pages and print again with `BacksideOnly` mode to complete a manual duplex printing.
`BackSideOnly`	Only prints all pages that appear on the back side of the paper.

Type

object

Access

R/W

Note: (Booklet subsetting using `subsetFrom` and `subsetTo`) Since the booklet output can change by the source page range (by setting `firstPage` and `lastPage` properties of the PrintParams object), the same effect cannot be achieved easily by changing these page range properties. For example. the first (2-side) sheet of an 8-page booklet job has a page number sequence of [8, 1, 2, 7] while the first sheet of 16-page booklet job has a page number sequence of [16, 1, 2, 15]. The `subsetFrom` and `subsetTo` properties are useful for printing certain pages of a booklet document with different devices or media. A typical example would be printing the cover and the inside cover in color while rest of the document is in black and white. Another common example is printing the cover page on thicker colored paper.

Example 1 (binding)

Set up booklet printing for right-side binding of text, and print.

```
var pp = this.getPrintParams();
pp.pageHandling = pp.constants.handling.booklet;
pp.booklet.binding = pp.constants.bookletBindings.Right;
this.print(pp);
```

Example 2 (duplexMode)

Print booklet in duplex mode, printing only the front pages.

```
pp.pageHandling = pp.constants.handling.booklet;
pp.booklet.duplexMode = pp.constants.bookletDuplexMode.FrontSideOnly;
this.print(pp);
```

Example 3 (subsetFrom and subsetTo)

Set up booklet printing to print the second sheet only and print.

```
var pp = this.getPrintParams();
pp.pageHandling = pp.constants.handling.booklet;
pp.booklet.subsetFrom = 1;
pp.booklet.subsetTo = 1;
this.print(pp);
```

Set booklet printing from the second sheet to the last sheet.

```
pp.booklet.subsetFrom = 1;
pp.booklet.subsetTo = -1;
```

Set booklet printing to print last sheet only.

```
pp.booklet.subsetFrom = -1;
pp.booklet.subsetTo = -1;
```

Set booklet printing to print last sheet two sheets.

```
pp.booklet.subsetFrom = -2;
pp.booklet.subsetTo = -1;
```

Set booklet printing to print all pages except the last two.

```
pp.booklet.subsetFrom = 0;
pp.booklet.subsetTo = -3;
```

colorOverride

6.0			

Specifies whether to use color override. Values are the properties of the `constants colorOverrides` object. Illegal values are treated as `auto`, the default value.

Note: This property is supported on the Windows platform only.

colorOverrides object

Property	Description
`auto`	Let Acrobat decide color overrides.
`gray`	Force color to grayscale.
`mono`	Force color to monochrome.

Type

Integer constant

Access

R/W

Example

```
var pp = this.getPrintParams();
pp.colorOverride = pp.constants.colorOverrides.mono;
this.print(pp);
```

colorProfile

6.0			

The color profile to use. A list of available color spaces can be obtained from `printColorProfiles`. The default is “Printer/PostScript Color Management”.

Type

String

Access

R/W

constants

6.0			

Each instance of a PrintParams object inherits this property, which is a wrapper that holds various constant values. The values are all integers allowing read access only. They are used as option values of some of the other properties of the PrintParams object, and their values are listed with the properties to which they apply.

Constant Object	Contains Constant Values for this Property
`bookletBindings`	`booklet`
`bookletDuplexMode`	`booklet`
`colorOverrides`	`colorOverride`
`fontPolicies`	`fontPolicy`
`handling`	`pageHandling`
`interactionLevel`	`interactive`
`nUpPageOrders`	`nUpPageOrder`
`printContents`	`printContent`
`flagValues`	`flags`
`rasterFlagValues`	`rasterFlags`
`subsets`	`pageSubset`
`tileMarks`	`tileMark`
`usages`	`usePrinterCRD` `useT1Conversion`

Type

object

Access

R

downloadFarEastFonts

6.0			

If `true` (the default), send Far East fonts to the printer if needed. Set this property to `false` if the printer has Far East fonts but incorrectly reports that it needs them.

Type

Boolean

Access

R/W

fileName

6.0			

The device-independent path for a file name to be used instead of sending the print job to the printer (Print to File). The path may be relative to the location of the current document. When printing to a file, if the interaction level (see `interactive`) is set to `full`, it is lowered to `automatic`.

The default value is the empty string (no file name).

Note: Printing to a file produces output suitable for the printer, for example, Postscript or GDI commands.

When `printerName` is an empty string and `fileName` is specified, the current document is saved as a PostScript file.

Type

String

Access

R/W

Example

```
var pp = this.getPrintParams();
pp.fileName = "/c/print/myDoc.prn";
this.print(pp);
```

Example 2

Save the current document as a PostScript file.

```
var pp = this.getPrintParams();
pp.fileName = "/c/temp/myDoc.ps";
pp.printerName = "";
this.print(pp);
```

firstPage

6.0			

The first page number of the document to print. The number is 0-based. The first page of any document is 0, regardless of page number labels. The default value is 0, and values that are out of the document's page range are treated as 0.

See also `lastPage`.

Type

Integer

Access

R/W

Example

```
var pp = this.getPrintParams();
pp.firstPage = 0;
pp.lastPage = 9;
this.print(pp);
```

flags

6.0			

A bit field of flags to control printing. These flags can be set or cleared using bitwise operations through the `constants flagValues` object.

Zero or more flags can be set; unsupported flags are ignored. The flags default to those set by user preferences.

constants.flagValues object

The table below lists the properties of the flagValues object; unless otherwise noted, these properties are not available in Adobe Reader.

Property	Description
`applyOverPrint`	Do overprint preview when printing. Turn off if overprinting is natively supported.
`applySoftProofSettings`	Use the soft proofing settings before doing color management.
`applyWorkingColorSpaces`	Apply working color spaces when printing.
`emitHalftones`	Emit the halftones specified in the document.

Property	Description
`emitPostScriptXObjects`	PostScript only, do include PostScript XObjects' content in output.
`emitFormsAsPSForms`	Converts Form XObjects to PS forms. The default is off.
`maxJP2KRes`	Use the maximum resolution of JPeg2000 images instead of the best matching resolution.
`setPageSize`	Enable setPageSize. Choose the paper tray by the PDF page size. Available in Adobe Reader.
`suppressBG`	Do not emit the BlackGeneration in the document.
`suppressCenter`	Do not center the page. Available in Adobe Reader.
`suppressCJKFontSubst`	Suppress CJK Font Substitution on Printer—does not apply when `kAVEmitFontAllFonts` is used.
`suppressCropClip`	Do not emit the cropbox page clip. Available in Adobe Reader.
`suppressRotate`	Do not rotate the page. Available in Adobe Reader.
`suppressTransfer`	Do not emit the transfer functions in the document.
`suppressUCR`	Do not emit UnderColorRemovals in the document.
`useTrapAnnots`	Print TrapNet and PrinterMark annotations, even if the print setting is "document only".
`usePrintersMarks`	Print PrinterMark annotations, even if the print setting is "document only". Available in Acrobat Professional only.

Type

Integer

Access

R/W

Example 1

In the Output options section of the Advanced Print Setup dialog box, check the Apply Output Preview Settings check box.

```
pp = getPrintParams();
fv = pp.constants.flagValues;
// or pp.flags |= fv.applySoftProofSettings;;
pp.flags = pp.flags | fv.applySoftProofSettings;
this.print(pp);
```

Example 2

Uncheck Auto-Rotate and Center (checked by default) in the Print dialog box.

```
pp = getPrintParams();
fv = pp.constants.flagValues;
pp.flags |= (fv.suppressCenter | fv.suppressRotate);
this.print(pp);
```

Example 3

In the PostScript options section of the Advanced Print Setup dialog box, check the Emit Undercolor Removal/Black Generation check box.

```
pp = getPrintParams();
fv = pp.constants.flagValues;
pp.flags &= ~(fv.suppressBG | fv.suppressUCR)
this.print(pp)
```

fontPolicy

6.0			

Sets the font policy. The value of the `fontpolicy` property is set through the `constants fontPolicies` object. The default is `pageRange`.

Type

Integer

Access

R/W

constants.fontPolicies object

Property	Description
`everyPage`	Emit needed fonts before every page and free all fonts after each page. This produces the largest, slowest print jobs, but requires the least amount of memory from the printer.
`jobStart`	Emit needed fonts at the beginning of the print job and free them at the end of the print job. This produces the smallest, fastest print jobs, but requires the most memory from the printer.
`pageRange`	(Default) Emit fonts before the first page that uses them and free them after the last page that uses them. This also produces the smallest and fastest print jobs and can use less memory. However, the print job must be printed as produced because of page ordering. **Note:** `pageRange` can be a good compromise between speed and memory. However, do not use it if the PostScriptcript pages will be programmatically reordered afterwards.

gradientDPI

6.0			X

The dots per inch to use when rasterizing gradients. This value can generally be set lower than `bitmapDPI` because it affects areas to which the eye is less sensitive. It must be set from 1 to 9600. Illegal values are treated as 150. If the document protections specify a maximum printing resolution, the lower of the two values will be used. The default value is 150.

Type

Integer

Access

R/W

interactive

6.0			

Specifies the level of interaction between the user and the print job. The value of this property is set through the `constants interactionLevel` object. The default is `full`.

Note: (Acrobat 7.0) Non-interactive printing can only be executed during batch, console, and menu events. Printing is made non-interactive by setting `bUI` to `false` when calling the Doc `print` method or by setting the `interactive` property to `silent`, for example,

```
var pp = this.getPrintParams();
pp.interactive = pp.constants.interactionLevel.silent;
```

Outside of batch, console, and menu events, the values of `bUI` and of `interactive` are ignored, and a print dialog box will always be presented.

See also "Privileged versus non-privileged context" on page 32.

Type

Integer

Access

R/W

constants.interactionLevel Object

Property	Description
`automatic`	No print dialog box is displayed. During printing, a progress monitor and cancel dialog box are displayed and removed automatically when printing is complete.
`full`	Displays the print dialog box, allowing the user to change print settings and requiring the user to press OK to continue. During printing, a progress monitor and cancel dialog box is displayed and removed automatically when printing is complete.
`silent`	No print dialog box is displayed. No progress or cancel dialog box is displayed. Even error messages are not displayed.

Example

```
var pp = this.getPrintParams();
pp.interactive = pp.constants.interactionLevel.automatic;
pp.printerName = "Adobe PDF";
this.print(pp);
```

lastPage

6.0			

The last 0-based page number of the document to print. The term "0-based" means the first page of any document is 0, regardless of page number labels. If the value is less than `firstPage` or outside the legal range of the document, this reverts to the default value. The default value is the number of pages in the document less one.

See `firstPage` for an example.

Type

Integer

Access

R/W

nUpAutoRotate

7.0			

A Boolean value that if `true`, automatically rotates each page to match the page orientation to the available paper area during Multiple Pages Per Sheet printing. The default is `false`, but `nUpAutoRotate` obeys the print settings.

Multiple Pages Per Sheet is obtained by setting `pageHandling` to `nUp`.

Type

Boolean

Access

R/W

nUpNumPagesH

7.0			

The number of pages to lay out in the horizontal direction when printing Multiple Pages Per Sheet. The default is 2, but `nUpNumPagesH` obeys the print settings.

Multiple Pages Per Sheet is obtained by setting `pageHandling` to `nUp`.

Type

Integer

Access

R/W

Example

Perform Multiple Pages Per Sheet printing on this document, set up parameters, and print.

```
   pp = this.getPrintParams();
   pp.pageHandling = pp.constants.handling.nUp;
   pp.nUpPageOrders = pp.constants.nUpPageOrders.Vertical;
   pp.nUpNumPagesH = 3;
   pp.nUpNumPagesV = 3;
   pp.nUpPageBorder=true;
   pp.nUpAutoRotate=true;
this.print(pp);
```

nUpNumPagesV

7.0			

The number of pages to be laid out in the vertical direction when printing Multiple Pages Per Sheet. The default is 2, but `nUpNumPagesV` obeys the print settings.

Multiple Pages Per Sheet is obtained by setting `pageHandling` to `nUp`.

See nUpNumPagesH for an example.

Type

Integer

Access

R/W

nUpPageBorder

7.0			

A Boolean value that if `true`, draws and prints a page boundary around each of the pages during Multiple Pages Per Sheet printing. The default is `false`, but `nUpPageBorder` obeys the print settings.

Multiple Pages Per Sheet is obtained by setting `pageHandling` to `nUp`.

See `nUpNumPagesH` for an example.

Type

Boolean

Access

R/W

nUpPageOrder

7.0			

When printing multiple pages per sheet, the `nUpPageOrder` property determines how the multiple pages are laid out on the sheet. The value of the `nUpPageOrder` property is set through the `constants nUpPageOrders` object. The default is `Horizontal`, but `nUpPageOrder` obeys the print settings.

Multiple Pages Per Sheet is obtained by setting `pageHandling` to `nUp`.

Type

Integer

Access

R/W

constants.nUpPageOrders Object

Property	Description
`Horizontal`	Pages are placed from left to right, from top to bottom.
`HorizontalReversed`	Pages are placed from right to left, from top to bottom.
`Vertical`	Pages are placed from top to bottom, from left to right.

Example

Perform Multiple Pages Per Sheet printing on this document, set the parameters, and print.

```
pp = this.getPrintParams();
pp.pageHandling = pp.constants.handling.nUp;
pp.nUpPageOrders = pp.constants.nUpPageOrders.Horizontal;
pp.nUpNumPagesH = 2;
pp.nUpNumPagesV = 2;
pp.nUpPageBorder=true;
this.print(pp);
```

pageHandling

6.0			

Takes one of seven values specified by the `constants` `handling` object. If set to an illegal value, it is treated as `shrink`. The default is `shrink`.

Type

Integer

Access

R/W

constants.handling Object

Property	Reader	Description
`none`		No page scaling is applied.
`fit`		Pages are enlarged or shrunk to fit the printer's paper.
`shrink`		Small pages are printed small, and large pages are shrunk to fit on the printer's paper.
`tileAll`	No	All pages are printed using tiling settings. This can be used to turn a normal-sized page into a poster by setting the `tileScale` property greater than 1.

Property	Reader	Description
tileLarge	No	Small or normal pages are printed in the original size and large pages are printed on multiple sheets of paper.
nUp		(Version 7.0) Pages are rescaled to print multiple pages on each printer page. Properties related to Multiple Pages Per Sheet printing are nUpAutoRotate, nUpNumPagesH, nUpNumPagesV, nUpPageBorder and nUpPageOrder.
booklet		(Version 8.0) Prints multiple pages on the same sheet of paper in the order required to read correctly when folded. The properties of the booklet object are used to set the parameters for booklet printing.

Example 1

```
var pp = this.getPrintParams();
pp.pageHandling = pp.constants.handling.shrink;
this.print(pp);
```

Example 2

Perform Multiple Pages Per Sheet printing on this document, set the parameters and print.

```
pp = this.getPrintParams();
pp.pageHandling = pp.constants.handling.nUp;
pp.nUpPageOrders = pp.constants.nUpPageOrders.Horizontal;
pp.nUpNumPagesH = 2;
pp.nUpNumPagesV = 2;
pp.nUpPageBorder=true;
this.print(pp);
```

Example 3 (Version 8.0)

Print document as a booklet, taking all the default settings.

```
var pp = this.getPrintParams();
pp.pageHandling = pp.constants.handling.booklet;
this.print(pp);
```

pageSubset

6.0			

Select even, odd, or all the pages to print. The value of pageSubset is set through the constants subsets object. The default is all.

Type

Integer

Access

R/W

constants.subsets Object

Property	Description
`all`	Print all pages in the page range.
`even`	Print only the even pages. Page labels are ignored, and the document is treated as if it were numbered 1 through n, the number of pages.
`odd`	Print only the odd pages.

Example

```
var pp = this.getPrintParams();
pp.pageSubset = pp.constants.subsets.even;
this.print(pp);
```

printAsImage

6.0			

Set to `true` to send pages as large bitmaps. This can be slow and more jagged looking but can work around problems with a printer's PostScript interpreter. Set `bitmapDPI` to increase or decrease the resolution of the bitmap. If interaction (see `interactive`) is `full`, the user's printer preferences for `printAsImage` will be used. The default is `false`.

Type

Boolean

Access

R/W

printContent

6.0			

Sets the contents of the print job. The value of the `printContents` property is set through the `constants printContents` object. The default is `doc`.

Type

Integer

Access

R/W

constants.printContents Object

Property	Description
doc	Print the document contents, not comments.
docAndComments	Print the document contents and comments.
formFieldsOnly	Print the contents of form fields only. Useful for printing onto pre-preprinted forms.

Example

Set printer to silently print form fields only.

```
var pp = this.getPrintParams();
pp.interactive = pp.constants.interactionLevel.silent;
pp.printContent = pp.constants.printContents.formFieldsOnly;
this.print(pp);
```

printerName

6.0			

The name of the destination printer. This property is a Windows-only feature. Currently, the destination printer cannot be set through this property in Mac OS.

By default, printerName is set to the name of the default printer. If you set printerName to an empty string, the default printer is used. When printerName is an empty string and fileName is a nonempty string, the current document is saved as a PostScript file. See Example 2 below.

See also app.printerNames.

Type

String

Access

R/W

Example 1

```
var pp = this.getPrintParams();
pp.printerName = "hp officejet d series";
this.print(pp);
```

Example 2

Save the current document as a PostScript file.

```
var pp = this.getPrintParams();
pp.fileName = "/c/temp/myDoc.ps";
pp.printerName = "";
this.print(pp);
```

psLevel

6.0			

Level of PostScript that is emitted to PostScript printers. Level 0 indicates to use the PostScript level of the printer. Level 1 is not supported. In addition to 0, current legal values of `psLevel` are 2 and 3. If the printer only supports PostScript level 1, `printAsImage` is set to `true`. Illegal values are treated as 3. The default value for `psLevel` is 3.

Type

Integer

Access

R/W

rasterFlags

6.0			✖

A bit field of flags. These flags can be set or cleared using bitwise operations through the `constants rasterFlagValues` object. The default is set by user preferences.

Type

Integer

Access

R/W

constants.rasterFlagValues Object

The table that follows lists the properties of the rasterFlagValues object. None of these properties are available in Adobe Reader.

Property	Description
`textToOutline`	Text converted to outlines can become thicker (especially noticeable on small fonts). If text is mixed into artwork with transparency, it may be converted to outline during flattening, resulting in inconsistency with text that is not mixed into artwork. In this case, turning on this option ensures that all text looks consistent.
`strokesToOutline`	Strokes converted to outlines can become thicker (especially noticeable on thin strokes). If strokes are mixed into artwork with transparency, they may be converted to outlines during flattening, resulting in inconsistency with strokes that are not mixed into artwork. In this case, turning on this option ensures that all strokes look consistent.
`allowComplexClip`	This option ensures that the boundaries between vector artwork and rasterized artwork fall closely along object paths. Selecting this option reduces stitching artifacts that result when part of an object is flattened while another part of the object remains in vector form. However, selecting this option may result in paths that are too complex for the printer to handle.
`preserveOverprint`	Select this option if you are printing separations and the document contains overprinted objects. Selecting this option generally preserves overprint for objects that are not involved in transparency and therefore improves performance. This option has no effect when printing composite. Turning it off might result in more consistent output because all overprinting will be flattened, whether or not it is involved in transparency.

Example 1

In the Advanced Printing Setup dialog box, check the "Convert All Text to Outlines" check box in the Transparency Flattening option.

```
pp = getPrintParams();
rf = pp.constants.rasterFlagValues;
pp.rasterFlags |= rf.textToOutline;
this.print(pp);
```

Example 2

In the Advanced Printing Setup dialog box, uncheck "Complex Clip Regions" (checked by default) in the Transparency Flattening option.

```
pp = getPrintParams();
rf = pp.constants.rasterFlagValues;
pp.rasterFlags = pp.rasterFlags & ~rf.allowComplexClip;
// or pp.rasterFlags &= ~rf.allowComplexClip;
this.print(pp);
```

reversePages

6.0			

Set to `true` to print pages in reverse order (last to first). The default value is `false`.

Type

Boolean

Access

R/W

tileLabel

6.0			✖

Label each page of tiled output. Labeled pages indicate row and column, file name, and print date. The default is `false`.

Type

Boolean

Access

R/W

tileMark

6.0			✖

Tile marks indicate where to cut the page and where overlap occurs. The value is set through the `constants tileMarks` object. If set to an illegal value, it is treated as `none`. The default is `none`.

Type

Integer

Access

R/W

constants.tileMarks Object

Property	Description
`none`	No tile marks
`west`	Western style tile marks
`east`	Eastern style tile marks

tileOverlap

6.0			ⓧ

The number of points that tiled pages have in common. Value must be between 0 and 144. Illegal values are treated as 0. The default value is 0.

Type

Integer

Access

R/W

tileScale

6.0			ⓧ

The amount that tiled pages are scaled. Pages that are not tiled are unaffected by this value. The default is unscaled (1.0). Larger values increase the size of the printout (for example, 2.0 is twice as large, a value of 0.5 is half as large). The value of `tileScale` must be between 0.01 and 99.99. Illegal values are treated as 1.0, which is the default value.

Type

Number

Access

R/W

transparencyLevel

6.0			X

An integer value from 1 to 100 indicates how hard Acrobat tries to preserve high-level drawing operators. A value of 1 indicates complete rasterization of the image, which results in poor image quality but high speeds. A value of 100 indicates as much should be preserved as possible, but can result in slow print speeds. If set to an illegal value, 75 is used. When rasterizing, the `bitmapDPI` and `gradientDPI` values are used. The default value is 75.

Type

Integer

Access

R/W

usePrinterCRD

6.0			

Takes one of three values. The value is set through the `constants usages` object. See also `useT1Conversion`; the two properties use the same values, but the interpretations are different.

Type

Integer

Access

R/W

constants.usages Object

Property	Description
`auto`	Let Acrobat decide whether the printer Color Rendering Dictionary (CRD) should be used. Acrobat maintains a list of a handful of printers that have incorrect CRDs. Illegal values are treated as `auto`. The default is `auto`.
`use`	Use the printer's CRD.
`noUse`	Do not use the printer's CRD.

useT1Conversion

6.0			

Takes one of three values. The value of the `useT1Conversion` property is set through the `constants usages` object. See also `usePrinterCRD`; the two properties use the same values, but the interpretations are different.

Note: This property is supported on Windows platforms only.

Type

Integer

Access

R/W

This property uses the `usages` object (see page 588) values as follows.

Property	Description
`auto`	Let Acrobat decide whether to disable converting Type 1 fonts to more efficient printer representations (for example, TrueType). Acrobat maintains a list of a handful of printers that have problems with these fonts. Illegal values are treated as `auto`. The default is `auto`.
`use`	Allow conversion of Type 1 fonts even if the printer is known to have problems with alternative font representations.
`noUse`	Never convert Type 1 fonts to more efficient representations.

RDN

This generic object represents a Relative Distinguished Name. It is used by `securityHandler.newUser` and the `certificate.issuerDN` and `subjectCN` properties.

It has the following properties.

Property	Type	Access	Version	Description
`businessCategory`	String	R	8.0	Business category
`c`	String	R	5.0	Country or region. Must be a two-character upper case ISO 3166 standard string (for example, "US").
`cn`	String	R	5.0	Common name (for example, "John Smith")
`countryOfCitizenship`	String	R	8.0	Country of citizenship
`countryOfResidence`	String	R	8.0	Country of residence
`dateOfBirth`	String	R	8.0	Date of birth (not supported by `newUser`)
`dc`	String	R	8.0	Domain Component
`dnQualifier`	String	R	8.0	Distinguished Name Qualifier
`e`	String	R	6.0	Email address (for example, "jsmith@example.com")
`gender`	String	R	8.0	Gender
`generationQualifier`	String	R	8.0	Generation qualifier
`givenName`	String	R	8.0	Given name
`initials`	String	R	8.0	Initials
`l`	String	R	8.0	Locality or province
`name`	String	R	8.0	Name
`nameAtBirth`	String	R	8.0	Name at birth
`o`	String	R	5.0	Organization name (for example, "Adobe Systems Incorporated")
`ou`	String	R	5.0	Organizational unit (for example, "Acrobat Engineering")
`placeOfBirth`	String	R	8.0	Place of birth
`postalAddress`	String	R	8.0	Postal address (not supported by `newUser`)
`postalCode`	String	R	8.0	Postal code

Property	Type	Access	Version	Description
`pseudonym`	String	R	8.0	Pseudonym
`serialNumber`	String	R	8.0	Serial number
`sn`	String	R	8.0	Surname
`st`	String	R	8.0	State
`street`	String	R	8.0	Street
`title`	String	R	8.0	Title

ReadStream

A ReadStream object is an object literal that represents a stream of data. It contains a method to allow reading the data stream.

Method	Parameters	Returns	Description
`read`	`nBytes`	String	The read method takes the number of bytes to read and returns a hex-encoded string with the data from the stream. The read method is a destructive operation on the stream and returns a zero length string to indicate the end of the stream.

Rendition

A Rendition contains information needed to play a media clip, including embedded media data (or a URL) and playback settings. It corresponds to a Rendition in the Acrobat authoring user interface.

A Rendition is a base type for either a MediaRendition or a MediaSelector. A function that accepts a Rendition can take either of these two types. The properties and methods described in this section are available for both MediaRendition and MediaSelector. Use the `type` property to distinguish between MediaRendition and MediaSelector.

Rendition properties

altText

6.0			

The alternate text string for the rendition (an empty string if no alternate text was specified). This property is available only if the `type` of the `rendition` is `app.media.renditionType.media` (a MediaRendition).

Type

String

Access

R

Example

Get the `altText` of a rendition.

```
this.media.getRendition("myClip").altText;
```

See the examples that follow `app.media.getAltTextSettings`.

doc

6.0			

A reference to the document that contains the Rendition.

Type

Doc

Access

R

fileName

6.0			

If the media is embedded, this property returns an empty string. Otherwise it returns the file name or URL of the media. This property is available only if the `type` of the `rendition` is `app.media.renditionType.media`.

Type

String

Access

R

type

6.0			

An `app.media.renditionType` value indicating the type of rendition.

Currently, there are two types: MediaRendition and RenditionList:

- When `Rendition.type` is equal to `app.media.renditionType.media`, the Rendition is a MediaRendition. A MediaRendition is an individual Rendition, as it appears in the Settings tab of the Multimedia Properties dialog box.
- When `Rendition.type` is equal to `app.media.renditionType.selector`, the Rendition is a RenditionList. A RenditionList is an array of MediaRendition. The list is the one that appears in the Settings tab of the Multimedia Properties dialog box.

Future versions of Acrobat may add more `renditionType` values, so JavaScript code should not assume that only the existing `app.media.renditionType` values may be encountered.

Type

Number

Access

R

uiName

6.0			

The name of the Rendition, as found in the N entry in its dictionary in the PDF file.

Type

String

Access

R

Example

The following is executed as a Rendition action.

```
console.println("Preparing to play \""
  + event.action.rendition.uiName + "\"");
```

See the event object for a description of `event.action.rendition`.

Rendition methods

getPlaySettings

6.0			

Creates and returns a `MediaSettings` object that can be used to create a MediaPlayer object.

This method is available only for a MediaRendition.

Parameters

`bGetData`	(optional) A Boolean value. If `true`, the MediaSettings object returns the MediaData (See MediaSettings.data).

Returns

A `MediaSettings` object

Note: `app.media.getAltTextSettings` calls `getPlaySettings(false)` to obtain the correct settings to display alternate text.

This `MediaSettings` object includes these properties:

`autoPlay`
`baseURL` (if specified in `rendition`)

```
bgColor
bgOpacity
data (if bGetData is true)
duration
endAt
layout
monitorType
palindrome
showUI
rate
repeat
startAt
visible
volume
windowType
```

In the current version of Acrobat, all of these properties are present in the settings object (except as noted above). `null` is used when values such as `startAt` are unspecified. This may change in the future to return only those values that are actually specified, with defaults assumed for the rest.

Example

```
// Get the MediaSettings for this Rendition
var settings = myRendition.getPlaySettings();
if( settings.startAt !== null ) // Do NOT use this strict comparison!
...
if( settings.startAt ) // This is OK
...
```

See `app.media.getAltTextSettings` and `app.media.openPlayer` for examples of usage.

select

6.0			

Selects a media player to play a MediaRendition or a RenditionSelector. If the Rendition is a RenditionSelector, `select` examines every MediaRendition contained within and selects the most suitable one. (See `type` for a description of RenditionSelector and MediaRendition.)

The return value is a `MediaSelection` object that can be used to create a `MediaSettings` object. This object can then be used to create a `MediaPlayer` object.

Parameters

`bWantRejects`	(optional) If `bWantRejects` is `true`, the `rejects` property of the resulting MediaSelection will contain information about media players that were rejected during the selection process.
`oContext`	(optional) `oContext` is a `MediaSelection.selectContext` value from a previous `Rendition.select` call. This parameter allows you to write a loop that calls `Rendition.select` repeatedly until you find a media player that satisfies any selection criteria that you want to test in JavaScript code.

Returns

A `MediaSelection` object

Example 1

Get a usable MediaSelection for this Rendition.

```
var selection = rendition.select();
```

Example 2

Get the name of the selected rendition. This script is executed from a Rendition action event.

```
var selection = event.action.rendition.select();
console.println( "Preparing to play " + selection.rendition.uiName);
```

testCriteria

6.0			

Tests the Rendition against any criteria that are specified in the PDF file, such as minimum bandwidth, and returns a Boolean value indicating whether the Rendition satisfied all of those criteria.

Returns

Boolean

Report

The Report object allows the user to programmatically generate PDF documents suitable for reporting with JavaScript. Use the `writeText` constructor to create a `Report` object; for example,

```
var rep = new Report();
```

The properties and methods can then be used to write and format a report.

Report properties

absIndent

5.0			✗

Controls the absolute indentation level. It is desirable to use the `indent` and `outdent` methods whenever possible, because they correctly handle indentation overflows.

If a report is indented past the middle of the page, the effective indent is set to the middle. Note that `divide` indicates that it has been indented too far.

Type

Number

Access

R/W

color

5.0			✗

Controls the color of any text and any divisions written into the report.

Text is written to the report with `writeText` and divisions (horizontal rules) are written using `divide`.

Type

Color

Access

R/W

Example

```
var rep = new Report();
rep.size = 1.2;
rep.color = color.blue;
rep.writeText("Hello World!");
```

size

5.0			✗

Controls the size of any text created by `writeText` It is a multiplier. Text size is determined by multiplying the `size` property by the default size for the given style.

Type

Number

Access

R/W

Example

Write a "Hello World!" document.

```
var rep = new Report();
rep.size = 1.2;
rep.writeText("Hello World!");
```

style

6.0			✗

This property controls the style of the text font for the text created by `writeText`. Values of `style` are:

```
DefaultNoteText
NoteTitle
```

Type

String

Access

R/W

Example

Start a new report, set font size, write short text and open report.

```
var rep = new Report();
rep.size = 1.2;
rep.style = "DefaultNoteText";
rep.writeText("Hello World!");
rep.open("My Report");
```

Report methods

breakPage

5.0			✗

Ends the current page and begins a new one.

divide

5.0			✗

Writes a horizontal rule across the page at the current location with the given width. The rule goes from the current indent level to the rightmost edge of the bounding box. If the indent level is past the middle of the bounding box, the rule shows this.

Parameters

`nWidth`	(optional) The horizontal rule width to use.

indent

5.0			✗

Increments the current indentation mark by `nPoints` or the default amount. If a report is indented past the middle of the page, the effective indent is set to the middle. Note that `divide` makes a mark to indicate whether it has been indented too far.

See `writeText` for an example of usage.

Parameters

`nPoints`	(optional) The number of points to increment the indentation mark.

mail

5.0			✗

Ends report generation and mails the report.

See also `mailGetAddrs`, `app.mailMsg`, the Doc `mailForm` method, and the `FDF` object `mail` method.

Parameters

`bUI`	(optional) Specifies whether to display a user interface. If `true` (the default), the rest of the parameters are used to seed the compose-new-message window that is displayed to the user. If `false`, the `cTo` parameter is required and all others are optional. **Note:** (Acrobat 7.0) When this method is executed in a non-privileged context, the `bUI` parameter is not honored and defaults to `true`. See "Privileged versus non-privileged context" on page 32.
`cTo`	(optional) A semicolon-separated list of recipients for the message.
`cCc`	(optional) A semicolon-separated list of CC recipients for the message.
`cBcc`	(optional) A semicolon-separated list of BCC recipients for the message.
`cSubject`	(optional) The subject of the message. The length limit is 64 KB.
`cMsg`	(optional) The content of the message. The length limit is 64 KB.

open

5.0			✗

Ends report generation, opens the report in Acrobat and returns a Doc that can be used to perform additional processing of the report.

Parameters

`cTitle`	The report title.

Returns

A Doc.

Example

Open a report, get the Doc, and set some properties of the document.

```
var docRep = rep.open("myreport.pdf");
docRep.info.Title = "End of the month report: August 2000";
docRep.info.Subject = "Summary of comments at the August meeting";
```

See `writeText` for a more complete example.

outdent

5.0			X

The opposite of indent; that is, decrements the current indentation mark by `nPoints` or the default amount.

See `writeText` for an example of usage.

Parameters

`nPoints`	(optional) The number of points to decrement the indentation mark.

Report

5.0			X

A constructor. Creates a new `Report` object with the given media and bounding boxes (values are defined in points or 1/72 of an inch). Defaults to a 8.5 x 11 inch media box and a bounding box that is indented 0.5 inches on all sides from the media box.

Parameters

`aMedia`	(optional) The media type.
`aBBox`	(optional) The bounding box size.

Returns

A `Report` object.

save

5.0		S	X

Ends report generation and saves the report to the specified path.

Note: This method can only be executed during a batch or console event. See "Privileged versus non-privileged context" on page 32 for details. The `event` object contains a discussion of JavaScript events.

Parameters

`cDIPath`	The device-independent path.
`cFS`	(optional) The file system. The only value for `cFS` is "CHTTP". In this case, the `cDIPath` parameter should be an URL. This parameter is only relevant if the web server supports WebDAV.

Example 1

```
rep.save("/c/myReports/myreport.pdf");
```

Example 2

```
rep.save({
   cDIPath: "http://www.example.com/reports/WebDAV/myreport.pdf",
   cFS:"CHTTP"}
);
```

writeText

5.0			X

Writes out a block of text to the report. Every call begins on a new line at the current indentation mark. Correctly wraps Roman, CJK, and WGL4 text.

Parameters

`String`	The block of text to use.

Example

```
// Get the comments in this document, and sort by author
this.syncAnnotScan();
annots = this.getAnnots({nSortBy: ANSB_Author});

// Open a new report
var rep = new Report();

rep.size = 1.2;
rep.color = color.blue;

 if (annots) {
   rep.writeText("Summary of Comments: By Author");
   rep.color = color.black;
   rep.writeText(" ");
   rep.writeText("Number of Comments: " + annots.length);
   rep.writeText(" ");

   var msg = "\200 page %s: \"%s\"";
   var theAuthor = annots[0].author;
```

```
    rep.writeText(theAuthor);
    rep.indent(20);
    for (var i=0; i < annots.length; i++) {
      if (theAuthor != annots[i].author) {
        theAuthor = annots[i].author;
        rep.writeText(" ");
        rep.outdent(20);
        rep.writeText(theAuthor);
        rep.indent(20);
      }
      rep.writeText(
        util.printf(msg, 1 + annots[i].page, annots[i].contents));
    }
} else {
    var msg = "No annotations found in this document, %s.";
    rep.writeText(util.printf(msg, this.documentFileName));
}
// Now open the report
var docRep = rep.open("myreport.pdf");
docRep.info.Title = "End of the month report: August 2006";
docRep.info.Subject = "Summary of comments at the August meeting";
```

Row

This generic JavaScript object contains the data from every column in a row. It is returned by the `Statement` object `getRow` method. It contains the following properties:

Property	Type	Access	Description
`columnArray`	Array	R	An array of `Column` objects. It is equivalent to what the `Statement` object `getColumnArray` method would return if called on the same `Statement` object at the same time that this `row` object was created.
column properties	any	R	There is a property corresponding to each column selected by the query, containing the data for that row in that column.

ScreenAnnot

A ScreenAnnot object represents a screen annotation, which is a rectangular area within a PDF document viewed on the display screen. A ScreenAnnot may have Renditions and RenditionActions associated with it for multimedia playback.

ScreenAnnot properties

altText

6.0			

The alternate text string for the annotation (an empty string if no alternate text was specified).

Type

String

Access

R

Example

Get an annotation and write its `altText` to the debug console.

```
var annot = this.media.getAnnot({ nPage:0, cAnnotTitle: "myScreen" });
console.println( "annot.altText = " + annot.altText );
```

alwaysShowFocus

6.0			

Normally, a screen annotation shows and hides a focus rectangle to indicate whether it has the keyboard focus. If this property is `true`, the focus rectangle is displayed by the screen annotation even if it does not have the focus. This is used for docked media playback, so that the focus rectangle of the annotation can remain visible even though the media player actually has the keyboard focus.

This property is not saved in the PDF file. If you change it, the change affects the current session only.

Type

Boolean

Access

R/W

display

6.0			

Same as the Field object `display` property.

This property is not saved in the PDF file. If you change it, the change affects the current session only.

Type

Integer

Access

R/W

Example

Hide the annotation.

```
var annot = this.media.getAnnot({ nPage:0, cAnnotTitle: "myScreen" });
annot.display = display.hidden;
```

doc

6.0			

A reference to the document that contains the screen annotation.

Type

Doc

Access

R

events

6.0			

An `Events` object containing the EventListeners that are attached to a screen annotation.

This property is not saved in the PDF file. If you change it, the change affects the current session only.

Type

`Events` object

Access

R/W

Example

Create a simple focus EventListener.

```
var annot = this.media.getAnnot({ nPage:0, cAnnotTitle: "myScreen" });
var myFocusEvent = {
   onFocus: function () {
      console.println("Focusing...");
   }
};
annot.events.add( myFocusEvent );
```

This EventListener can be removed at a later time by executing the following code.

```
annot.events.remove( myFocusEvent );
```

extFocusRect

6.0			

When a screen annotation draws a focus rectangle, the rectangle normally encloses only the screen annotation itself. If `extFocusRect` is specified, the screen annotation takes the union of its normal rectangle and `extFocusRect`, and it uses the resulting rectangle to draw the focus rectangle.

This property is not saved in the PDF file. If you change it, the change affects the current session only.

Type

Array of 4 Numbers

Access

R/W

innerDeviceRect

6.0			

This property and `outerDeviceRect` define the interior and exterior rectangles of the screen annotation as it appears in the current page view.

Type

Array of 4 Numbers

Access

R

Example

Get the `innerDeviceRect`.

```
annot = this.media.getAnnot({ nPage:0, cAnnotTitle: "myScreen" });
console.println("annot.innerDeviceRect = "
   + annot.innerDeviceRect.toSource() );
```

noTrigger

6.0			

If `true`, the screen annotation cannot be triggered through the Acrobat user interface. Typically, clicking on a screen annotation starts playback of a media player. This property suppresses this.

This property is not saved in the PDF file. If you change it, the change affects the current session only.

Type

Boolean

Access

R/W

Example

Use form buttons to control the media clip, so turn off interaction with the annotation.

```
annot = this.media.getAnnot({ nPage:0, cAnnotTitle: "myScreen" });
annot.noTrigger = true;
```

outerDeviceRect

6.0			

This property and `innerDeviceRect` define the interior and exterior rectangles of the screen annotation as it appears in the current page view.

Type

Array of 4 Numbers

Access

R8

page

6.0			

The page number of the PDF file in which the screen annotation is located.

Type

Number

Access

R

player

6.0			

A reference to the MediaPlayer associated with a screen annotation. This property exists only for a `ScreenAnnot` object that is connected to a MediaPlayer. The property is set by `MediaPlayer.open` or by methods that call `open` indirectly, such as `app.media.openPlayer`.

Type

ScreenAnnot

Access

R/W

rect

6.0	D		

The rectangle of the screen annotation in default user coordinates. Changing this property dirties the PDF file; the new setting is saved if the PDF file is saved. `innerDeviceRect` and `outerDeviceRect` are also updated to reflect the new rectangle.

TType

Array of 4 Numbers

Access

R/W

Example

Adjust the position of the annotation slightly.

```
var annot = this.media.getAnnot({ nPage:0, cAnnotTitle: "myScreen" });
var aRect = annot.rect;
aRect[0] += 10;
aRect[2] += 10;
annot.rect = aRect;
```

ScreenAnnot methods

hasFocus

6.0			

Tells whether the screen annotation currently has the keyboard focus.

Returns

Boolean

setFocus

6.0			

Sets the keyboard focus to the screen annotation. The focus is set synchronously (before `setFocus` returns) if it is safe to do so. If it is unsafe to set the focus synchronously (for example, when the property is changed within an on event method), `bAllowAsync` determines what happens:

- If `true`, the focus will be set asynchronously during idle time.
- If `false` or omitted, the focus remains unchanged.

The return value is `true` if the operation was performed synchronously, or `false` if it was deferred to be performed asynchronously.

Parameters

`bAllowAsync`	(optional) A Boolean value that determines the behavior of `setFocus` when it is not safe to set the focus synchronously. If `true`, the focus will be set asynchronously during idle time. If `false` or omitted, the focus remains unchanged. The default is `false`.

Returns

Boolean

search

The `search` object is a static object that accesses the functionality provided by the Acrobat Search plug-in. This plug-in must be installed to interface with the `search` object (see `available`).

See also the `Index` object, which is returned by some of the methods of the `search` object.

The results for `query` calls are displayed in the Find dialog box of Acrobat.

Note: Acrobat 7.0 indexes are incompatible with the search engines of Acrobat 5.0 and earlier versions.

In Acrobat 7.0, searching indexes created by versions of Acrobat 5.0 and earlier is not possible on the Mac OS platform.

search properties

attachments

7.0			

Determines whether any PDF file attachments should be searched along with the base document. The default is `false`.

This property is ignored on the Mac OS platform when searching a document from within the Safari web browser. As a result, attachments are not searched inside Safari.

Type

Boolean

Access

R/W

available

5.0			

Returns `true` if the Search plug-in is loaded and query capabilities are possible. A script author should check this Boolean before performing a query or other `search` object manipulation.

Type

Boolean

Access

R

Example

Make sure the `search` object exists and is available.

```
if (typeof search != "undefined" && search.available) {
   search.query("Cucumber");
}
```

bookmarks

6.0			

Specifies whether bookmarks are searched for the query. The default is `false`.

Type

Boolean

Access

R/W

docInfo

6.0			

Specifies whether the document information is searched for the query. The default is `false`.

Type

Boolean

Access

R/W

docText

6.0			

Specifies whether the document text is searched for the query. The default is `true`.

Type

Boolean

Access

R/W

docXMP

6.0			

Specifies whether document-level XMP metadata is searched for the query. The default is `false`.

Type

Boolean

Access

R/W

ignoreAccents

70			

Specifies whether accents and diacriticals are ignored while searching the query term. The default is `false`.

Type

Boolean

Access

R/W

ignoreAsianCharacterWidth

6.0			

Specifies whether the Kana characters in the document exactly match the search query. The default is `false`.

Type

Boolean

Access

R/W

indexes

5.0		S	

An array of all of the `Index` objects currently accessible by the search engine.

Note: (Acrobat 7.0) This property can only be accessed during a batch or console event. See "Privileged versus non-privileged context" on page 32 for details. The `event` object contains a discussion of JavaScript events.

Type

Array

Access

R

Example

Enumerate all of the indexes and dump their names.

```
for (var i = 0; i < search.indexes.length; i++) {
   console.println("Index[" + i + "]=", search.indexes[i].name);
}
```

jpegExif

6.0			

Specifies whether EXIF data associated with JPEG images in the PDF document is searched. The default is `false`.

Type

Boolean

Access

R/W

legacySearch

6.0			

Returns `true` if the `Search5.api` plug-in is loaded. This plug-in provides the capability to search indexes generated by Acrobat Catalog in Acrobat 5.0 and earlier versions. See the sections in Acrobat Help pertaining to searching such indexes.

Type

Boolean

Access

R

markup

6.0			

Specifies whether markup (annotations) are searched for the query. The default is `false`.

Type

Boolean

Access

R/W

matchCase

5.0			

Specifies whether the search query is case sensitive. The default is `false`.

Type

Boolean

Access

R/W

matchWholeWord

6.0			

Specifies whether search finds only occurrences of complete words that are specified in the query. For example, when this option is set to `true`, if you search for the word “stick”, the words “tick” and “sticky” will not be highlighted. The default is `false`.

Type

Boolean

Access

R/W

maxDocs

5.0			

The maximum number of documents that will be returned as part of the search query. The default is 100 documents.

Type

Integer

Access

R/W

objectMetadata

7.0			

This property determines whether object-level metadata should be searched. This is the same data that is visible from the Acrobat 7.0 Tools > Object Data > Object Data Tool menu item.

The default is `false`.

Type

Boolean

Access

R/W

proximity

5.0			

Specifies whether the search query will reflect the proximity of words in the results ranking when performing the search that contains *AND* Boolean clauses. The default is `false`. See the sections in the Acrobat Help pertaining to Search capabilities for a more thorough discussion of proximity.

Type

Boolean

Access

R/W

proximityRange

7.0			

The range of proximity search in number of words. This property will be used only if the property `proximity` is set to `true`. See the sections in the Acrobat Help pertaining to Search capabilities for a more thorough discussion of proximity.

The default is 900 words. The value of this parameter can be any non-zero positive integer.

Type

Integer

Access

R/W

refine

5.0			

Specifies whether the search query will take the results of the previous query and refine the results based on the next query. The default is `false`. See the sections in the Acrobat Help pertaining to Search capabilities for a more thorough discussion of refining queries.

Type

Boolean

Access

R/W

soundex

✖			

Note: Beginning with Acrobat 6.0, the use of this property is discouraged. It has a value of `false` and access is restricted to read only.

Specifies whether the search query will take the sound of words (for example, MacMillan, McMillan, McMilon) into account when performing the search. The default is `false`. See the sections in the Acrobat Help pertaining to Search capabilities for a more thorough discussion of soundex.

Type

Boolean

Access

R

stem

5.0			

Specifies whether the search query will take the stemming of words (for example, run, runs, running) into account when performing the search. The default is `false`. See the sections in the Acrobat Help pertaining to Search capabilities for a more thorough discussion of stemming.

Type

Boolean

Access

R/W

thesaurus

✖			

Note: Beginning with Acrobat 6.0, the use of this property is discouraged. This property has a value of `false` and access is restricted to read only.

Specifies whether the search query will find similar words. For example, searching for “embellish” might yield “enhanced”, “gracefully”, or “beautiful”. The default is `false`.

Type

Boolean

Access

R

wordMatching

6.0			

How individual words in the query will be matched to words in the document. Values are:

```
MatchPhrase
MatchAllWords
MatchAnyWord
BooleanQuery (default)
```

This property is relevant only when a query has more than one word. The `BooleanQuery` option is ignored when searching the active document.

Type

String

Access

R/W

search methods

addIndex

5.0	P	S	

Adds the specified index to the list of searchable indexes.

Note: As of Acrobat 8.1, this method will only index pdx files.

Parameters

`cDIPath`	A device-independent path to an index file on the user's hard drive.
`bSelect`	(optional) Whether the index should be selected for searching.

Returns

An `Index` object.

Example

Adds the standard help index for Acrobat to the index list:

```
search.addIndex("/c/program files/adobe/Acrobat 5.0/help/exchhelp.pdx",
true);
```

getIndexForPath

5.0			

Searches the index list and returns the `Index` object whose path corresponds to the specified path.

Parameters

`cDIPath`	A device-independent path to an index file on the user's hard drive.

Returns

The `Index` object whose path corresponds to the specified path.

query

5.0		S	

Searches the specified document or index for the specified text. Properties associated with the `search` object (such as `matchCase`, `matchWholeWord`, `stem`) may affect the result.

Note: As of Acrobat 8.1, if the `cDIPath` parameter is specified, this method is only permitted to execute through the console or in a batch process.

Parameters

`cQuery`	The text for which to search.

`cWhere`	(optional) Specifies where the text should be searched. Values are:
	`ActiveDoc`
	`Folder`
	`Index`
	`ActiveIndexes` (default)

`cDIPath`	(optional) A device-independent path to a folder or Catalog index on the user's computer. When `cWhere` is `Folder` or `Index`, this parameter is required.

Examples

Search for the word "Acrobat".

cWhere	Query
ActiveIndexes	`search.query("Acrobat"); // "ActiveIndexes" is the default.` `search.query("Acrobat", "ActiveIndexes");`
ActiveDoc	`search.query("Acrobat", "ActiveDoc");`

Folder	`search.query("Acrobat","Folder","/c/myDocuments");`
	`search.query("Acrobat","Folder",app.getPath("user","documents"));`
	`search.query("Acrobat", "Folder", "//myserver/myDocuments");`

Index	`search.query("Acrobat", "Index", "/c/Myfiles/public/index.pdx");`

removeIndex

5.0	P	S	

Removes the specified `Index` object from the index list.

Note: As of Acrobat 8.1, this method is only permitted to execute through the console or in a batch process.

Parameters

`index`	The `Index` object to remove from the index list.

security

The `security` object is a static JavaScript object that exposes security-related PDF functions such as encryption and digital signatures. Security functions are performed using a `SecurityHandler` object, which is obtained from the `security` object using the `getHandler` method.

Note: The `security` object is available without restriction, including in Adobe Reader. The methods and properties of the `security` object can only be executed during batch, console or application initialization events including in Adobe Reader, except where otherwise stated. See also "Privileged versus non-privileged context" on page 32. The `event` object contains a discussion of JavaScript events.

security constants

Beginning with Acrobat 7.0, several convenience strings are defined within the security object. The constants are held as properties of the wrapper objects listed below.

HandlerName object

These are constants used when determining which handler to use.

Property	Type	Access	Description
`StandardHandler`	String	R	This value can be specified in the `handler` property for a `SecurityPolicy` object that is based on the Standard (password-based) security handler.
`PPKLiteHandler`	String	R	This value can be specified in the `handler` property for a `SecurityPolicy` object that is based on the PPKLite (certificate-based) security handler. This value can also be passed to `security.getHandler` to create a new security context.
`APSHandler`	String	R	This the value specified in the `handler` property for a `SecurityPolicy` object that is based on the Adobe Policy Server security handler. This value can also be passed to `security.getHandler` to create a new security context.

Example

The constant (string) `security.StandardHandler` is used to specify the `handler` property of the `SecurityPolicy` object.

```
security.getHandler(security.PPKLiteHandler, true);
```

EncryptTarget Object

These constants are used when determining what data a policy is encrypting. They can be used in the `target` property of the `SecurityPolicy` object.

Property	Type	Access	Description
`EncryptTargetDocument`	String	R	The Security Policy encrypts the entire document when applied.
`EncryptTargetAttachments`	String	R	The Security Policy encrypts only the file attachments embedded within the document. This means the document can be opened, but attachments cannot be opened without providing the correct security authentication. It is used for eEnvelope workflows.

Example

```
var filterOptions = { target: security.EncryptTargetAttachments };
security.chooseSecurityPolicy( { oOptions: filterOptions } );
```

security properties

handlers

5.0			

An array containing the language-independent names of the available security handlers that can be used for encryption or signatures.

See also `getSecurityPolicies`.

The following information applies to different versions of Acrobat:

- Beginning with Acrobat 6.0, access to this property is unrestricted, to allow querying to see which handlers are available.
- In Acrobat 6.0, this call returned three handlers, Adobe.PPKLite, Adobe.PPKMS, and Adobe.AAB. Starting with Acrobat 7.0, all the functionality provided by Adobe.PPKMS has been rolled into Adobe.PPKLite, and Adobe.PPKMS is no longer available as a separate handler.
- Beginning with Acrobat 7.0, a new handler is available, Adobe.APS. This handler is used for authentication prior to calling any of the methods `encryptUsingPolicy`, `getSecurityPolicies`, or `chooseSecurityPolicy`. It has no other valid usage currently.
- Beginning with Acrobat 7.0, security Constants (see page 623) are defined for each of the handlers. (Adobe.AAB is an exception. No constant was added because this handler will probably be deprecated in the near future.) These constants should be used when creating a new handler instance with `getHandler` or comparing against the handlers list.

Type

Array

Access

R

Example

Get the list of security handlers available on this system:

```
for ( var i=0; i < security.handlers.length; i++ )
   console.println(security.handlers[i])
```

The output to the console might be

```
Adobe.APS
Adobe.PPKLite
Adobe.PPKMS
Adobe.AAB
```

validateSignaturesOnOpen

5.0	P	S	X

Gets or sets the user-level preference that causes signatures to be automatically validated when a document is opened.

Note: The property can be used to get in all situations, but can only set new values during a batch, console, or application initialization event. See "Privileged versus non-privileged context" on page 32 for details.

Type

Boolean

Access

R/W

security methods

chooseRecipientsDialog

6.0		S	X

Opens a dialog box that allows a user to choose a list of recipients. Returns an array of generic Group objects that can be used when encrypting documents or data using either `encryptForRecipients` or `addRecipientListCryptFilter` methods of the Doc.

Note: Can be executed only during a console, menu, or application initialization event. See "Privileged versus non-privileged context" on page 32 for details.

Parameters

`oOptions`	A `DisplayOptions` object containing the parameters for the display options.

Returns

An array of `Group` objects.

See the Doc `encryptForRecipients` method for a description of the `Group` object.

DisplayOptions object

The DisplayOptions object contains the following properties.

Property	Description
`bAllowPermGroups`	Controls whether permissions can be set for entries in the recipient list. Default value is `true`.
`bPlaintextMetadata`	If this property is specified, a check box is displayed to allow a user to select whether metadata is plaintext or encrypted. Its default value is the value of this property (`true` or `false`). If this property is not specified, the check box is not shown.
`cTitle`	The title to be displayed in the dialog box. The default is "Choose Recipients".
`cNote`	A note to be displayed in the dialog box. The default is not to show any note.
`bAllowImportFromFile`	Specifies whether the option is displayed that allows a user to import recipients from a file. The default value is `true`.
`bRequireEncryptionCert`	If `true`, recipients will be required to include an encryption certificate. The default value is `true`.

Property	Description
bRequireEmail	If true, recipients will be required to include an email address. The default value is false.
bUserCert	If true, the user will be prompted to provide his or her own certificate so that he or she can be included in the list of recipients. Setting this flag to true results in a prompt but does not require that the user provide a certificate.

Example 1

Retrieve groups with permissions

```
var oOptions = {
   bAllowPermGroups: true,
   bPlaintextMetadata: false,
   cTitle: "Encrypt and Email",
   cNote: "Select recipients",
   bAllowImportFromFile: false,
   bRequireEncryptionCert: true,
   bRequireEmail: true
};
var groupArray = security.chooseRecipientsDialog( oOptions );
console.println("Full name = "+ groupArray[0].userEntities[0].fullName);
```

Example 2

Get a list of recipients for which to encrypt data and email the document.

```
var oOptions = { bAllowPermGroups: false,
   cNote: "Select the list of recipients. "
   + "Each person must have both an email address and a certificate.",
   bRequireEmail: true,
   bUserCert: true
};
var oGroups = security.chooseRecipientsDialog( oOptions );
// Display the list of recipients in an alert
// Build an email "to" mailList
var numCerts = oGroups[0].userEntities.length;
var cMsg = "The document will be encrypted for the following:\n";
var mailList = new Array;
for( var g=0; g<numCerts; ++g )
{
   var ue = oGroups[0].userEntities[g];
   var oCert = ue.defaultEncryptCert;
   if( oCert == null )
      oCert = ue.certificates[0];
   cMsg += oCert.subjectCN + ", " + ue.email + "\n";
   var oRDN = oCert.subjectDN;
   if( ue.email )
   {
      mailList[g] = ue.email;
   }
```

```
    else
       if ( oRDN.e )
       {
          mailList[g] = oRDN.e;
       }
}
var result = app.alert( cMsg );
```

Example 3

List all the entries in an array of groups.

```
var  groups = security.chooseRecipientsDialog( oOptions );
for( g in groups ) {
   console.println( "Group No. " + g );
   // Permissions
   var perms = groups[g].permissions;
   console.println( "Permissions:" );
   for(p in perms) console.println( p + " = " + eval("perms." +p));
   // User Entities
   for( u in groups[i].userEntities ) {
   var user = groups[g].userEntities[u];
   console.println( "User No. " + u );
   for(i in user) console.println( i + " = " + eval("user." +i));
   }
}
```

chooseSecurityPolicy

7.0		S	X

Displays a dialog box to allow a user to choose from a list of security policies, filtered according to the options.

Note: Can be executed only during a batch, console, or application initialization event. See "Privileged versus non-privileged context" on page 32 for details. This method will display UI.

Parameters

`oOptions`	(optional) A SecurityPolicyOptions object containing the parameters used for filtering the list of security policies returned. If not specified, all policies found are displayed.

Returns

Returns a single SecurityPolicy object or `null` if the user cancelled the selection.

Example

Choose a policy and display the name.

```
var options = { cHandler: security.APSHandler };
var policy = security.chooseSecurityPolicy( options );
console.println("The policy chosen was: " + policy.name);
```

`security.APSHandler` is one of the security Constants (see page 232).

exportToFile

6.0		S	X

Exports a `Certificate` object to a local disk as a raw certificate file.

Note: Data being written must be data for a valid certificate; arbitrary data types cannot be written. This method will not overwrite an existing file.

See also `security.importFromFile`.

Parameters

`oObject`	The `Certificate` object that is to be exported to disk.
`cDIPath`	The device-independent save path. **Note:** The parameter `cDIPath` must be a safe path (see "Safe path" on page 31) and must end with the extension `.cer`.

Returns

The path of the file that was written, if successful.

Example

```
var outPath = security.exportToFile(oCert, "/c/outCert.cer");
```

getHandler

5.0		S	

Obtains a `SecurityHandler` object. The caller can create as many new engines as desired and each call to `getHandler` creates a new engine. However, there is only one UI engine.

Note: This method is available from batch, console, and app initialization events. See "Privileged versus non-privileged context" on page 32 for details.

Backward Compatibility: Because Adobe.PPKMS is no longer available as a separate handler starting with Acrobat 7.0, invoking `getHandler` with `cName` as "Adobe.PPKMS" returns the engine associated with Adobe.PPKLite handler.

Parameters

`cName`	The language-independent name of the security handler, as returned by the `handlers` property. (Acrobat 7.0) Beginning with Acrobat 7.0, constant strings are defined for each of the valid handlers. See security constants, in particular the HandlerName object object.
`bUIEngine`	(optional) If `true`, the method returns the existing security handler instance that is associated with the Acrobat user interface (so that, for example, a user can log in through the user interface). If `false` (the default), returns a new engine.

Returns

The `SecurityHandler` object specified by `cName`. If the handler is not present, returns a `null` object.

Example

Select the Adobe.PPKLite SecurityHandler.

```
// Validate signatures on open
security.validateSignaturesOnOpen = true;

// List all available signature handlers
var a = security.handlers;
for (var i = 0; i < a.length; i++)
   console.println("a["+i+"] = "+a[i]);

// Use "Adobe.PPKLite" handler engine for the UI
var ppklite = security.getHandler(
   security.PPKLiteHandler, true);
// Log in
ppklite.login("dps017", "/C/profiles/DPSmith.pfx");
```

See also the example following `signatureSign` for a continuation of this example.

getSecurityPolicies

7.0		S	X

Returns the list of security policies currently available, filtered according to the options specified. The master list of security policies will be updated prior to filtering. The default `SecurityHandler` objects are used to retrieve the latest policies. If no policies are available or none meet the filtering restrictions, `null` will be returned.

Note: You may be able to retrieve more policies by calling `login` on the default SecurityHandler objects before calling this function.

Can be executed only during a console or application initialization event. Not available in Adobe Reader.

Parameters

`bUI`	(optional) A flag controlling whether UI can be displayed. Default value is `false`.
`oOptions`	(optional) A `SecurityPolicyOptions` object containing the parameters used for filtering the list of security policies returned. If not specified, all policies found are returned.

Returns

An array of `SecurityPolicyOptions` objects or `null`.

SecurityPolicyOptions object

The SecurityPolicyOptions object has the following properties:

Property	Description
`bFavorites`	If not passed, policies are not filtered based on whether a policy is a Favorite. If `true`, only policies that are Favorites are returned. If `false`, only policies that are not Favorites are returned.
`cHandler`	If not passed, policies are not filtered based on security filter. If defined, only policies that match the specified security filter are returned. The valid values are defined in security Constants (see the `HandlerName object`). Only a single value can be passed.
`cTarget`	If not defined, policies are not filtered based on the target. If defined, only policies that match the specified target are returned. The valid values are defined in the `EncryptTarget` object of security Constants (page 624). Only a single value can be passed.

Example 1

Retrieve the list of favorite PPKLite policies and display the names. This example uses `security.PPKLiteHandler` (see security constants).

```
var options = { bFavorites:true, cHandler:security.PPKLiteHandler };
var policyArray = security.getSecurityPolicies( { oOptions: options } );
for( var i = 0; i < policyArray.length; i++)
   console.println( policyArray[i].name );
```

Example 2

Force the login, retrieve the list of APS policies, and display the names. This example uses `security.APSHandler` (see security constants).

```
var aps = security.getHandler( security.APSHandler, true );
aps.login();
var options = { cHandler: security.APSHandler };
var policyArray = security.getSecurityPolicies({
   bUI: true,
   oOptions: options });
for(var i = 0; i < policyArray.length; i++)
   console.println( policyArray[i].name );
```

importFromFile

6.0		S	X

Reads a raw data file and returns the data as an object with a type specified by `cType`. The file being imported must be a valid certificate. See also `security.exportToFile`

Parameters

`cType`	The type of object to be returned by this method. The only supported type is "Certificate".
`cDIPath`	(optional) When `bUI` is `false`, this parameter is required and specifies the device-independent path to the file to be opened. If `bUI` is `true`, this is the seed path used in the open dialog box.
`bUI`	(optional) `true` if the user should be prompted to select the file that is to be imported. The default is `false`.
`cMsg`	(optional) If `bUI` is `true`, the title to use in the open dialog box. If `cMsg` is not specified, the default title is used.

Returns

A `Certificate` object.

Example

```
var oMyCert = security.importFromFile("Certificate", "/c/myCert.cer");
```

SecurityHandler

SecurityHandler objects are used to access security handler capabilities such as signatures, encryption, and directories. Different security handlers have different properties and methods. This section documents the full set of properties and methods that security objects may have. Individual SecurityHandler objects may or may not implement these properties and methods.

SecurityHandler objects can be obtained using the `security.getHandler` method.

The JavaScript interface for Adobe.PPKLite signatures was introduced in Acrobat 5.0, and the remainder of the JavaScript interface was introduced in Acrobat 6.0. Prior to Acrobat 6.0, there was no support in Acrobat to enable JavaScript in third-party security handlers.

Not all security handlers are JavaScript-enabled. Not all JavaScript enabled handlers are enabled for all security operations. Third-party public key security handlers may support JavaScript, but only if they use the new *PubSec* programming interface that was introduced in Acrobat 6.0.

JavaScript-enabled handlers provided by Adobe include:

- The Adobe.PPKLite security handler supports signatures and encryption. On the Windows operating system, it provides directory access through the Microsoft Active Directory Scripting Interface (ADSI).
- The Adobe.AAB security handler provides a local address book and support for directory operations.

Note: The Standard security handler, used for password encryption of documents, is not JavaScript-enabled in general. However, starting with Acrobat 7.0, encryption using Standard security is possible using predefined policies. See `encryptUsingPolicy` for more details.

Also starting with Acrobat 7.0, the Adobe.APS handler can be used for encryption with the `encryptUsingPolicy` method. This handler also makes a directory available through the directory services, but because no certificates are returned from this directory, it is of limited general use.

Note: SecurityHandler objects can only be created using the `Security` object `getHandler` method. This method is available only for batch, console, and application initialization events (see "Privileged versus non-privileged context" on page 32 for details) and is available in Adobe Reader.

SecurityHandler properties

appearances

5.0		S	

An array containing the language-dependent names of the available user-configured appearances for the specified security handler. Appearances are used to create the on-page visual representation of a signature when signing a signature field. The name of an appearance can be specified as a signature info object property when signing a signature field using the Field object `signatureSign` method.

Acrobat provides a standard signature appearance module that is used by Adobe signature plug-ins and that can also be used by third-party signature plug-ins. This standard signature appearance module is preconfigured with one appearance and can be configured by users to contain more appearances. The name of the one pre-configured appearance, called *Standard Text* in the user interface, is not returned by this property.

If a security handler does not support selection of appearances, this property will return null.

Type

Array

Access

R

digitalIDs

6.0		S	

The certificates that are associated with the currently selected digital IDs for this security handler.

Type

Object

Access

R

The return value is a generic object with the following properties:

Property	Type	Version	Description
`oEndUserSignCert`	`Certificate` object	6.0	The certificate that is associated with the currently selected digital IDs that is to be used by this SecurityHandler object when signing. The property is undefined if there is no current selection.
`oEndUserCryptCert`	`Certificate` object	6.0	The certificate that is associated with the currently selected digital IDs that is to be used when encrypting a document with this SecurityHandler object. The property is undefined if there is no current selection.
`certs`	Array of `Certificate` objects	6.0	An array of certificates corresponding to the list of all digital IDs that are available for this SecurityHandler object.
`stores`	Array of Strings	6.0	An array of strings, one for every `Certificate` object, identifying the store where the digital ID is stored. The string values are up to the security handler. For *Adobe.PPKLite* the valid values are 'PKCS12' and 'MSCAPI'.

The Adobe.PPKLite security handler returns all currently available digital IDs present in Password-protected digital ID files (both PKCS#12 and APF) and, on Windows, IDs present in the Windows (MSCAPI) store.

Both `oEndUserSignCert` and `oEndUserCryptCert` properties can be set using the user-interface. `oEndUserSignCert` can also be set using the `login` method. This means that `oEndUserCryptCert` will only be returned when using a Security Handler object that is obtained using the `getHandler` method with `bUIEngine` set to `true`.

Example

Export to a file the certificate that is associated with the currently selected digital IDs.

```
var sh = security.getHandler( "Adobe.PPKMS", true );
var ids = sh.digitalIDs;
var oCert = ids.oEndUserSignCert;
security.exportToFile( oCert, "/c/MySigningCert.cer" );
```

directories

6.0		S	

An array of the available `Directory` objects for this Security Handler. New `Directory` objects can be created using the `newDirectory` method.

Type

Array

Access

R

directoryHandlers

6.0		S	

An array containing the language-independent names of the available directory handlers for the specified security handler. For example, the Adobe.PPKMS security handler has a directory handler named Adobe.PPKMS.ADSI that supports queries using the *Microsoft Active Directory Script Interface* (ADSI). Valid directory handler names are required when activating a new `Directory` object using its `info` property.

Type

Array

Access

R

docDecrypt

6.0		S	

Returns `true`, if the security handler is capable of decrypting PDF files.

Type

Boolean

Access

R

docEncrypt

6.0		S	

Returns `true`, if the security handler is capable of encrypting PDF files.

Type

Boolean

Access

R

isLoggedIn

5.0		S	

Returns `true` if currently logged into this `SecurityHandler` object. See the `login` method.

Different security handlers will have their own rules for determining the value of this property. The *Adobe.PPKLite* handler will return `true` if a user is logged in to a profile file (also called credential file, implemented as a PKCS#12 file). Adobe.PPKMS will always return `true`.

Type

Boolean

Access

R

Example

Generic script to illustrate `isLoggedIn`.

```
var ppklite = security.getHandler("Adobe.PPKLite", true);
console.println( "Is logged in = " + ppklite.isLoggedIn ); // False
ppklite.login( "dps017", "/C/signatures/DPSmith.pfx");
console.println( "Is logged in = " + ppklite.isLoggedIn ); // True
```

loginName

5.0		S	

The name associated with the actively selected signing digital ID for the security handler. This may require that the `login` method be called to select a signing credential. The return value is `null` if a signing credential is not selected or if the security handler does not support this property.

Type

String

Access

R

loginPath

5.0		S	

The device-independent path to the user's profile file used to log in to the security handler. The return value is null if no one is logged in, if the security handler does not support this property, or if this property is irrelevant for the currently logged in user.

Type

String

Access

R

name

5.0		S	

The language-independent name of the security handler. Example values for the Default Certificate, Windows Certificate, and Entrust Security Handlers are *Adobe.PPKLite*, Adobe.PPKMS, and *Entrust.PPKEF*. All security handlers must support this property.

Type

String

Access

R

signAuthor

6.0		S	

Specifies whether the security handler is capable of generating certified documents. A certified document is signed with both a byte-range signature and an object signature. Object signatures, which are generated by traversing the document's object tree, are used to detect and prevent modifications to a document. See the `mdp` property of the `SignatureInfo` object for details regarding modification detection and prevention (MDP) settings.

Type

Boolean

Access

R

signFDF

6.0		S	

Indicates that the security handler is capable of signing FDF files.

Type

Boolean

Access

R

signInvisible

5.0		S	

Specifies whether the security handler is capable of generating invisible signatures.

Type

Boolean

Access

R

signValidate

6.0		S	

Indicates whether the security handler is capable of validating signatures.

Type

Boolean

Access

R

signVisible

5.0		S	

Specifies whether the security handler is capable of generating visible signatures.

Type

Boolean

Access

R

uiName

5.0		S	

The language-dependent string for the security handler. This string is suitable for user interfaces. All security handlers must support this property.

Type

String

Access

R

validateFDF

6.0		S	

Returns `true`, if the security handler is capable of validating signatures over FDF files.

Type

Boolean

Access

R

SecurityHandler methods

login

5.0		S	

Provides a mechanism by which digital IDs can be accessed and selected for a particular Security Handler. Through the user interface, a default digital ID can be selected that persists either eternally or for as long as the application is running. If such a selection has been made through the UI, it might not be necessary to log into a Security Handler prior to using the digital ID.

Parameters tend to be specific to a particular handler. The behavior for Adobe.PPKLite and Adobe.PPKMS handlers is specified below.

The parameters `cPassword` and `cDIPath` are provided for backward compatibility, or they can be included as properties of the `oParams` object. This latter method is the preferred calling convention beginning in Acrobat 6.0.

See also `logout`, `newUser`, and `loginName`.

Parameters

`cPassword`	(optional, Acrobat 5.0) The password necessary to access the password-protected digital ID. This parameter is supported by Adobe.PPKLite for accessing digital ID files and PKCS#11 devices.
`cDIPath`	(optional, Acrobat 5.0) A device-independent path to the password-protected digital ID file or a PKCS#11 library. This parameter is supported by Adobe.PPKLite.

`oParams`	(optional, Acrobat 6.0) A `LoginParameters` object with parameters that are specific to a particular `SecurityHandler` object. The common fields in this object are described below. These fields include the `cDIPath` and `cPassword` values, thus allowing the parameter list to be expressed in different ways.
`bUI`	(optional, Acrobat 6.0) Set to `true` if the user interface should be used to log the user in. If set to `false`, the default engine associated with the user interface is not used and the logged in state for the digital ID is not shown in the Security Settings dialog box. This attribute should be supported by all security handlers that support this method.

Returns

Returns `true` if the login succeeded, `false` otherwise.

LoginParameters Object

This generic JavaScript object contains parameters for the `login` method. It has the following properties:

Property	Type	Version	Description
`cDIPath`	String	5.0	The path to a file that contains the digital ID or a PKCS#11 library. Supported by Adobe.PPKLite security handler.
`cPassword`	String	6.0	A password that is used to authenticate the user. This password may be used to access a password-protected digital ID file or a PKCS#11 device. Supported by Adobe.PPKLite security handler. Note that Acrobat does not guarantee that this password is obfuscated in memory.
`cPFX`	String	7.0	(optional) A hex-encoded PFX to log in to. If this parameter is specified, it takes precedence over `cDIPath`. **Note:** This parameter is only used internally. Currently, there is no way to retrieve a hex encoded PFX file through JavaScript.
`oEndUserSignCert`	generic object	6.0	Selects a digital ID for the purpose of performing end-user signing. The value of this property is a `Certificate` object (or a generic object with the same property names as a `Certificate` object), which defines the certificate that is being selected. It may not be necessary to call this method for a particular handler. For example, if logged in to a PKCS#12 file containing one signing digital ID with Adobe.PPKLite, a signing credential does not need to be selected. All security handlers must be able to process the binary and SHA1Hash properties of this object. This object can be empty if `bUI` is `true`.

Property	Type	Version	Description
cMsg	String	6.0	A message to display in the login dialog box, if bUI is true.
cURI	String	7.0	URI used to connect to a server. Supported by Adobe.APS and Adobe.PPKLite handlers. In the case of Adobe.PPKLite, the URI specifies a Roaming Credential server.
cUserId	String	7.0	User name used when connecting to a server. Supported by the Adobe.APS and Adobe.PPKLite handlers.
cDomain	String	7.0	Domain name used when connecting to a server. Only supported by the Adobe.APS handler.
iSlotID	Integer	7.0	Specifies the slot ID of a PKCS#11 device to log into. This parameter is supported by the Adobe.PPKLite handler only.
cTokenLabel	String	7.0	Specifies the token label of a PKCS#11 device to log into. This parameter is supported by the Adobe.PPKLite handler only.

Example 1

Log in and log out.

```
// Use the "Adobe.PPKLite" security handler object for the UI
var ppklite = security.getHandler( security.PPKLiteHandler, true );
var oParams = { cPassword: "dps017", cDIPath: "/C/DPSmith.pfx" }
ppklite.login( oParams );
<..... make a signature field and sign it ......>
ppklite.logout();
```

Use UI to select a credential, when already logged in.

```
ppklite.login(
{ oParams:
   { oEndUserSignCert: {},
   cMsg: "Select your Digital ID" },
   bUI : true
} );
```

Log in and select the signing credentials

```
var oCert = { SHA1Hash: "00000000" };
ppklite.login(
{ oParams:
   {  cDIPath: "/C/test/DPSmith.pfx",
      cPassword: "dps017",
      oEndUserSignCert: oCert,
      cMsg: "Select your Digital ID"
   },
bUI : true
});
```

Example 2

Use the "Adobe.PPKMS" security handler object, and select the credentials to use when signing.

```
var ppkms = security.getHandler( "Adobe.PPKMS" );
var oCert = myCerts[0];
ppkms.login( { oParams: { oEndUserSignCert: oCert } } );
```

Example 3

Use `security.APSHandler`, see security constants.

```
var aps = security.getHandler( security.APSHandler, true );
var oParams = { cUserName: "Acrobat", cPassword: "adobedon" };
aps.login( oParams );
<..... encrypt a document using this handle and a policy id .....>
aps.logout();
```

See `signatureSign` for details on signing a PDF document.

logout

5.0		S	

Logs out for the `SecurityHandler` object. This method is used by Adobe.PPKLite, not by *Adobe.PPKMS*.

Also see the `login` method.

Returns

Beginning in Acrobat 6.0, returns `true` if the logout succeeded, `false` otherwise. Previous Acrobat releases did not generate a return value.

newDirectory

5.0	P	S	

Returns a new `Directory` object. This object must be activated using its `info` property before it is marked for persistence and before it can be used for searches. Existing directory objects can be discovered using the `directories` property.

Returns

A new `Directory` object

newUser

5.0		S	X

Supports enrollment with Adobe.PPKLite and Adobe.PPKMS security handlers by creating a new self-sign credential.

Note: This method will not allow the user to overwrite an existing file.

Parameters

`cPassword`	(optional) The password necessary to access the password-protected digital ID file. This parameter is ignored by Adobe.PPKMS.
`cDIPath`	(optional) The device-independent path to the password-protected digital ID file. This parameter is ignored by Adobe.PPKMS. **Note:** Beginning with Acrobat 6.0, the parameter `cDIPath` must be a safe path (see "Safe path" on page 31) and end with the extension `.pfx`.
`oRDN`	(optional) The relative distinguished name (RDN) as an `RDN` object, page 590, containing the issuer or subject name for a certificate. The only required field is `cn`. If the country `c` is provided, it must be two characters, using the ISO 3166 standard (for example, "US").
`oCPS`	(optional, Acrobat 6.0) A generic object containing certificate policy information that will be embedded in the Certificate Policy extension of the certificate. The object has these properties: • `oid` is required and indicates the certificate policy object identifier. • `url` (optional) is a URL that points to detailed information about the policy under which the certificate has been issued • `notice` (optional) is an abridged version of the information, embedded in the certificate.
`bUI`	(optional, Acrobat 6.0) If `true`, the user interface can be used to enroll. This parameter is supported by all security handlers that support this method.
`cStore`	(optional, Acrobat 7.0) A string identifying the store where the generated credential has to be stored. For the Adobe.PPKLite security handler, the valid store identifiers are "PKCS12" and "MSCAPI". If this parameter is omitted and `cDIPath` is provided, the generated credential is stored in a PKCS#12 file, else it is stored in the CAPI store.

Returns

`true` if successful, throws an exception if not successful.

Example 1

Create a new PPKLite self-sign credential (Acrobat 5.0 syntax)

```
var ppklite = security.getHandler(security.PPKLiteHandler);
var oRDN = { cn: "Fred NewUser", c: "US" };
var oCPS = {oid: "1.2.3.4.5",
   url: "http://www.example.com/mycps.html",
   notice: "This is a self generated certificate, hence the "
      + "recipient must verify it's authenticity through an out "
      + "of band mechanism" };
ppklite.newUser( "testtest", "/d/temp/FredNewUser.pfx", oRDN, oCPS);

// Alternate generic object syntax, allowing additional parameters
var oParams = {
   cPassword : "myPassword",
   cDIPath : "/d/temp/FredNewUser.pfx",
   oRDN : oRDN,
   oCPS : oCPS,
   bUI : false
};
ppklite.newUser( oParams );
```

Example 2

Use a certificate from an existing signed field to create the RDN

```
var f = this.getField( "mySignature" );
f.signatureValidate();
var sigInfo = f.signatureInfo();
var certs = sigInfo.certificates;
var oSubjectDN = certs[0].subjectDN;

ppklite.newUser({
   cPassword: "dps017",
   cDIPath: "/c/temp/DPSmith.pfx",
   oRDN: oSubjectDN
});
```

setPasswordTimeout

5.0		S	X

Sets the number of seconds after which password should expire between signatures. This method is only supported by the Adobe.PPKLite security handler. For this handler the default timeout value for a new user is 0 (password always required).

Parameters

`cPassword`	The password needed to set the timeout value.
`iTimeout`	The timeout value, in seconds. Set to 0 for always expire (that is, password always required). Set to 0x7FFFFFFF for never expire.

Returns

Throws an exception if the user has not logged in to the Adobe.PPKLite security handler, or unsuccessful for any other reason.

Example

This example logs in to the *PPKLite* security handler and sets the password timeout to 30 seconds. If the password timeout has expired—30 seconds in this example—the signer must provide a password. The password is not necessary if the password has not timed out.

```
var ppklite= security.getHandler( "Adobe.PPKLite" );
ppklite.login( "dps017", "/d/profiles/DPSmith.pfx" );
ppklite.setPasswordTimeout( "dps017", 30 );
```

SecurityPolicy

7.0		S	X

The Security Policy object represents a group of security settings used to apply encryption to a document. It is acquired as the return value of both `getSecurityPolicies` and `chooseSecurityPolicy`.

SecurityPolicy properties

Property	Type	Access	Description
`policyID`	String	R	A generated string that uniquely identifies the Security Policy. It is not intended to be human-readable. This may be set to a known policy ID on a newly created SecurityPolicy object to force any method using this policy to retrieve the correct security settings before applying the policy.
`name`	String	R	The policy name used in the UI. It may be localized.
`description`	String	R	The policy description used in the UI. It may be localized.
`handler`	String	R	An enumerated value representing the security handler implementing this Security Policy. The possible values are defined in the `HandlerName` object in "security constants" on page 623.
`target`	String	R	An enumeration value representing the target data to be encrypted. The possible values are defined in the `EncryptTarget` object in "security constants" on page 623.

SignatureInfo

A generic JavaScript object that contains the properties of a digital signature. Some properties are supported by all handlers, and additional properties can be supported.

The SignatureInfo object is returned by the Field object methods `signatureValidate` and `signatureInfo` and is passed to the `FDF` object methods `signatureSign` and `signatureValidate`.

Writable properties can be specified when signing the object.

SignatureInfo properties

All handlers define the following properties.

SignatureInfo object properties

Property	Type	Access	Version	Description
`buildInfo`	Object	R	6.0	An object containing software build and version information for the signature. The format of this object is described in the technical note *PDF Signature Build Dictionary Specification* on the Adobe Solutions Network website.
`date`	Date object	R	5.0	The date and time that the signature was created, returned as a JavaScript Date object.
`dateTrusted`	Boolean	R	7.0	A Boolean value that indicates whether the date is from a trusted source. If this value is not present, the date should be assumed to be from an untrusted source (for example, the signer's computer system time).
`digestMethod`	String	R/W	8.0	The digest method to be used for signing. For Acrobat 8, the valid values are `SHA1`, `SHA256`, `SHA384`, `SHA512` and `RIPEMD160`. It is important that the caller knows that a particular signature handler can support this digest method.
`handlerName`	String	R	5.0	The language-independent name of the security handler that was specified as the Filter attribute in the signature dictionary. It is usually the name of the security handler that created the signature, but can also be the name of the security handler that the creator wants to be used when validating the signature.

SignatureInfo object properties

Property	Type	Access	Version	Description
`handlerUserName`	String	R	5.0	The language-dependent name corresponding to the security handler specified by `handlerName`. It is available only when the named security handler is available.
`handlerUIName`	String	R	5.0	The language-dependent name corresponding to the security handler specified by `handlerName`. It is available only when the named security handler is available.
`location`	String	R/W	5.0	Optional user-specified location when signing. It can be a physical location (such as a city) or hostname.

`mdp`	String	R/W	6.0	The Modification Detection and Prevention (MDP) setting that was used to sign the field or `FDF` object being read, or the MDP setting to use when signing. Values are:
				`allowNone`
				`allowAll`
				`default`
				`defaultAndComments`
				See "Modification Detection and Prevention (MDP) Values" on page 656 for details. The value of `allowAll`, the default, means that MDP is not used for the signature, resulting in this not being an certification signature.

`name`	String	R	5.0	Name of the user that created the signature.
`numFieldsAltered`	Number	R	5.0 only	Deprecated. The number of fields altered between the previous signature and this signature. Used only for signature fields. Beginning in Acrobat 7.0, the functionality offered by the Field object method `signatureGetModifications` should be used instead.

SignatureInfo object properties

Property	Type	Access	Version	Description
`numFieldsFilledIn`	Number	R	5.0 only	Deprecated. The number of fields filled-in between the previous signature and this signature. Used only for signature fields. Beginning in Acrobat 7.0, the functionality offered by the Field object method `signatureGetModifications` should be used instead.
`numPagesAltered`	Number	R	5.0 only	Deprecated. The number of pages altered between the previous signature and this signature. Used only for signature fields. Beginning in Acrobat 7.0, the functionality offered by the Field object method `signatureGetModifications` should be used instead.
`numRevisions`	Number	R	5.0	The number of revisions in the document. Used only for signature fields.
`reason`	String	R/W	5.0	The user-specified reason for signing.
`revision`	Number	R	5.0	The signature revision to which this signature field corresponds. Used only for signature fields.
`sigValue`	String	R	7.0	Raw bytes of the signature, as a hex encoded string.
`status`	Number	R	5.0	The validity status of the signature, computed during the last call to `signatureValidate`. See the return codes of the status property in the table "status and idValidity properties" on page 654.
`statusText`	String	R	5.0	The language-dependent text string, suitable for user display, denoting the signature validity status, computed during the last call to the `signatureValidate`.

SignatureInfo object properties

Property	Type	Access	Version	Description
`subFilter`	String	R/W	6.0	The format to use when signing. Consult the *PDF Reference* version 1.7 for a complete list of supported values. The known values used for public key signatures include adbe.pkcs7.sha1, adbe.pkcs7.detached, and adbe.x509.rsa_sha1. It is important that the caller know that a particular signature handler can support this format.
`timeStamp`	String	W	7.0	The URL of the server for time-stamping the signature. The only schemes and transport protocols supported for fetching time stamps are http or https. This property is write-only. If the signature is time stamped, during verification the property `dateTrusted` will be set to `true` (provided the time stamp signature is trusted) and the `verifyDate` and the signing date will be the same.
`verifyDate`	Date object	R	7.0	The date and time that the signature was verified (if the signature has been verified), returned as a JavaScript Date object.
`verifyHandlerName`	String	R	6.0	The language-independent name of the security handler that was used to validate this signature. This will be `null` if the signature has not been validated (that is, if the `status` property has a value of 1).
`verifyHandlerUIName`	String	R	6.0	The language-dependent name corresponding to the security handler specified by `verifyHandlerName`. This will be null if the signature has not been validated, that is, if the `status` property has a value of 1).

SignatureInfo object public key security handler properties

Public key security handlers may define the following additional properties:

Property	Type	Access	Version	Description
`appearance`	String	W	5.0	The name of the user-configured appearance to use when signing this field. PPKLite and PPKMS use the standard appearance handler. In this situation, the appearance names can be found in the signature appearance configuration dialog box of the Security user preferences. The default, when not specified, is to use the Standard Text appearance. Used only for visible signature fields.
`certificates`	Array	R	5.0	Array containing a hierarchy of certificates that identify the signer. The first element in the array is the signer's certificate. Subsequent elements include the chain of certificates up to the certificate authority that issued the signer's certificate. For self-signed certificates this array will contain only one entry.
`contactInfo`	String	R/W	5.0	The user-specified contact information for determining trust. For example, it can be a telephone number that recipients of a document can use to contact the author. This is not recommended as a scalable solution for establishing trust.
`byteRange`	Array	R	6.0	An array of numbers indicating the bytes that are covered by this signature.
`docValidity`	Number	R	6.0	The validity status of the document byte range digest portion of the signature, computed during the last call to `signatureValidate`. All PDF document signature field signatures include a byte range digest. See "Validity Values" on page 654 for details of the return codes.
`idPrivValidity`	Number	R	6.0	The validity of the identity of the signer. This value is specific to the handler. See "Private Validity Values" on page 655 for values supported by the Adobe.PPKLite and Adobe.PPKMS handlers. This value is 0 unless the signature has been validated, that is, if the `status` property has a value of 1.

Property	Type	Access	Version	Description
`idValidity`	Number	R	6.0	The validity of the identity of the signer as number. See the return codes of the `idValidity` property in the table "status and idValidity properties" on page 654.
`objValidity`	Number	R	6.0	The validity status of the object digest portion of the signature, computed during the last call to `signatureValidate`. For PDF documents, signature field certification signatures and document-level application rights signatures include object digests. All FDF files are signed using object digests. See "Validity Values" on page 654 for details of the return codes.
`revInfo`	Object	R	7.0	A generic object containing two properties: `CRL` and `OCSP`. These properties are arrays of hex-encoded strings, where each string contains the raw bytes of the revocation information that was used to carry out revocation checking of a certificate. For `CRL`, the strings represent CRLs. For `OCSP`, the strings represents OCSP responses. These properties are populated only if the application preference to populate them is turned on, because this data can potentially get very large.
`trustFlags`	Number	R	6.0	The bits in this number indicate what the signer is trusted for. The value is valid only when the value of the status property is 4. These trust settings are derived from the trust setting in the recipient's trust database, for example, the Acrobat Address Book (Adobe.AAB). Bit assignments are: **1** — Trusted for signatures **2** — Trusted for certifying documents **3** — Trusted for dynamic content such as multimedia **4** — Adobe internal use **5** — The JavaScript in the PDF file is trusted to operate outside the normal PDF restrictions
`password`	String	W	5.0	A password required as authentication when accessing a private key that is to be used for signing. This may or may not be required, dependent on the policies of the security handler.

status and idValidity properties

The following table list the codes returned by the SignatureInfo Object, `status` and `idValidity` properties.

Status code	Description
-1	Not a signature field.
0	Signature is blank or unsigned.
1	Unknown status. This occurs if the signature has not yet been validated; for example, if the document has not completed downloading over a network connection.
2	Signature is invalid.
3	Signature is valid but the identity of the signer could not be verified.
4	Signature is valid and the identity of the signer is valid.

Validity Values

The following codes are returned by the `docValidity` and `objValidity` properties. (See "SignatureInfo object public key security handler properties" on page 652). They provide a finer granularity of the validity of the signature than the `status` property.

Status code	Description
`kDSSigValUnknown`	Validity not yet determined.
`kDSSigValUnknownTrouble`	Validity could not be determined because of errors encountered during the validation process.
`kDSSigValUnknownBytesNotReady`	Validity could not be determined because all bytes are not available, for example, when viewing a file in a web browser. Even when bytes are not immediately available, this value may not be returned if the underlying implementation blocks when bytes are not ready. Adobe makes no commitment regarding whether validation checks will block or not block. However, the implementation in Acrobat 6.0 will block when validating `docValidity` and not block when validating `objValidity`.
`kDSSigValInvalidTrouble`	Validity for this digest was not computed because there were errors in the formatting or information contained in this signature. There is sufficient evidence to conclude that the signature is invalid.
`kDSSigValInvalidTrouble`	The validity for this digest is not used (for example, no document validity if no byte range).
`kDSSigValJustSigned`	The signature was just signed, so it is implicitly valid.
`kDSSigValFalse`	The digest or validity is invalid.
`kDSSigValTrue`	The digest or validity is valid.

Private Validity Values

Verification of the validity of the signer's identity is specific to the handler that is being used to validate the identity. This value may contain useful information regarding an identity. The identity is returned in the `idPrivValidity` property. Values for Adobe.PPKMS and Adobe.PPKLite security handlers are shown here. This value is also mapped to an `idValidity` value that is common across all handlers.

Status Code	idValidity Mapping	Security Handler	Description
`kIdUnknown`	1 (unknown)	PPKMS, PPKLite	Validity not yet determined.
`kIdTrouble`	1 (unknown)	PPKMS, PPKLite	Could not determine validity because of errors, for example, internal errors, or could not build the chain, or could not check basic policy.
`kIdInvalid`	2 (invalid)	PPKMS, PPKLite	Certificate is invalid: not time nested, invalid signature, invalid/unsupported constraints, invalid extensions, chain is cyclic.
`kIdNotTimeValid`	2 (invalid)	PPKMS, PPKLite	Certificate is outside its time window (too early or too late).
`kIdRevoked`	2 (invalid)	PPKMS	Certificate has been revoked.
`kIdUntrustedRoot`	1 (unknown)	PPKMS, PPKLite	Certificate has an untrusted root certificate.
`kIdBrokenChain`	2 (invalid)	PPKMS, PPKLite	Could not build a certificate chain up to a self-signed root certificate.
`kIdPathLenConstraint`	2 (invalid)	PPKLite	Certificate chain has exceeded the specified length restriction. The restriction was specified in Basic Constraints extension of one of the certificates in the chain.
`kIdCriticalExtension`	1 (unknown)	PPKMS	One of the certificates in the chain has an unrecognized critical extension.
`kIdJustSigned`	4 (valid)	PPKMS, PPKLite	Just signed by user (similar to kIdIsSelf)
`kIdAssumedValid`	3 (idunknown)	PPKMS	Certificate is valid to a trusted root, but revocation could not be checked and was not required.
`kIdIsSelf`	4 (valid)	PPKMS, PPKLite	Certificate is my credential (no further checking was done).

Status Code	idValidity Mapping	Security Handler	Description
`kIdValid`	4 (valid)	PPKMS, PPKLite	Certificate is valid to a trusted root (in the Windows or Acrobat Address Book).
`kIdRevocationUnknown`	?	PPKMS, PPKLite	Certificate is valid to a trusted root, but revocation could not be checked and was required by the user.

Modification Detection and Prevention (MDP) Values

Modification detection and prevention (MDP) settings control which changes are allowed to occur in a document before the signature becomes invalid. Changes are recorded outside of the byte range, for signature fields, and can include changes that have been incrementally saved as part of the document or changes that have occurred in memory between the time that a document is opened and when the signature is validated. MDP settings may only be applied to the first signature in a document. Use of MDP will result in an certification signature. MDP has one of the following four values:

`allowAll` — Allow all changes to a document without any of these changes invalidating the signature. This results in MDP not being used for the signature. This was the behavior for Acrobat 4.0 through 5.1.

`allowNone` — Do not allow any changes to the document without invalidating the signature. Note that this will also lock down the author's signature.

`default` — Allow form field fill-in if form fields are present in the document. Otherwise, do not allow any changes to the document without invalidating the signature.

`defaultAndComments` — Allow form field fill-in if form fields are present in the document and allow annotations (comments) to be added, deleted or modified. Otherwise, do not allow any changes to the document without invalidating the signature. Note that annotations can be used to obscure portions of a document and thereby affect the visual presentation of the document.

SOAP

The SOAP object allows remote procedure calls to be made to, or sends an XML Message to, a remote server from JavaScript.

The SOAP 1.1 protocol (see http://www.w3.org/TR/SOAP/) is used to marshall JavaScript parameters to a remote procedure call (either synchronously or asynchronously) and to unmarshall the result as a JavaScript object. The SOAP object also has the ability to communicate with web services, described by the Web Services Description Language (WSDL—see http://www.w3.org/TR/wsdl).

Note: The SOAP methods `connect`, request and `response` are available only for documents open in Acrobat Professional and Acrobat Standard and for documents with Form Export Rights open in Adobe Reader 6.0 or later.

SOAP properties

wireDump

6.0			

If `true`, synchronous SOAP requests will cause the XML Request and Response to be dumped to the JavaScript Console. This is useful for debugging SOAP problems.

Note: Beginning with Acrobat 8.0, this property is deprecated, new services should use `Net.SOAP.wireDump`, see page 545.

Type

Boolean

Access

R/W

SOAP methods

connect

6.0			Ⓕ

Converts the URL of a WSDL document (cURL) to a JavaScript object with callable methods corresponding to the web service.

The parameters to the method calls and the return values obey the rules specified for the `SOAP.request` method.

Note: Beginning with Acrobat 8.0, this method is deprecated, new services should use `Net.SOAP.connect`, see page 545.

Parameters

`cURL`	The URL of a WSDL document. It must be an HTTP or HTTPS URL.

Returns

A WSDL Service Proxy object with a JavaScript method corresponding to each operation in the WSDL document provided at the URL.

The parameters required for the method depend on the WSDL operation you are calling and how the operation encodes its parameters:

- If the WSDL operation is using the SOAP RPC encoding (as described in Section 7 of the SOAP 1.1 Specification), the arguments to the service method are the same as the parameter order in the WSDL document.
- If the WSDL service is using the SOAP document/literal encoding, the function will have a single argument indicating the request message. The argument may be a JavaScript object literal describing the message or it may be either a string or a `ReadStream` object with an XML fragment describing the message. The return value of the service method will correspond to the return value of the WSDL operation.

The JavaScript function objects corresponding to each web service method use the following properties if they are set. The default is for none of the properties to be set.

Property	Description
`asyncHandler`	Indicates that the web service method should be performed asynchronously. The property corresponds to the `oAsync` parameter of `SOAP.request`.
`requestHeader`	Indicates that the web service method should include a SOAP Header in the request. The property corresponds to the `oReqHeader` parameter of `SOAP.request`.
`responseHeader`	Indicates that the web service method should return a SOAP Header from the response. The property corresponds to the `oRespHeader` parameter of `SOAP.request`.
`authenticator`	Indicates how authentication should be handled for the web service method. The property corresponds to the `oAuthenticate` parameter of `SOAP.request`.

Exceptions

SOAP Faults cause a `SOAPError` exception to be thrown. If there is a problem at the networking level, such as an unavailable endpoint, a `NetworkError` is thrown. See the `request` method for more information.

Example

Echo a string and an integer using an echo service WSDL document.

A service WSDL Document URL is needed. These can be obtained from the "Round 2 Interop Services - using SOAP 1.2" section at the following URL: http://www.whitemesa.com/interop.htm.

```
var cURL = <get a URL for this service from
     http://www.whitemesa.com/interop.htm>;

// Connect to the test service
var service = SOAP.connect(cURL);

// Print out the methods this service supports to the console
for(var i in service) console.println(i);

var cTestString = "This is my test string";

// Call the echoString service -- it is an RPC Encoded method
var result = service.echoString(cTestString);

// This should be the same as cTestString
console.println(result + " == " + cTestString);

// Call the echoInteger service -- JavaScript doesn't support integers
// so we make our own integer object.
var oTestInt =
{
   soapType: "xsd:int",
   soapValue: "10"
};
var result = service.echoInteger(oTestInt);

// This should be the same as oTestInt.soapValue
console.println(result + " == " + oTestInt.soapValue);
```

This produces the following output:

```
echoBase64
echoBoolean
echoDate
echoDecimal
echoFloat
echoFloatArray
echoHexBinary
echoInteger
echoIntegerArray
echoPolyMorph
echoPolyMorphArray
echoPolyMorphStruct
echoString
echoStringArray
echoStruct
echoStructArray
echoVoid
This is my test string == This is my test string
10 == 10
```

queryServices

7.0		S	

Locates network services that have published themselves using DNS Service Discovery (DNS-SD). This method can locate services that have registered using Multicast DNS (mDNS) for location on a local networking link or through unicast DNS for location within an enterprise. The results of service location are always returned asynchronously and the query continues (with notification as services become available or unavailable) until it is stopped.

The result of querying for services is a set of service names that can be bound when needed by calling `resolveService`.

Services can either use a third-party mDNS responder to be located in the local network link or register themselves in a DNS server (either statically or dynamically) to be located within an enterprise networking environment.

Note: Beginning with Acrobat 8.0, this method is deprecated, new services should use `Net.Discovery.queryServices`, see page 546.

Parameters

`cType`	The DNS SRV Service Name to search for. Some possible examples are: **`"http"`** — Locate web servers **`"ftp"`** — Locate FTP servers See the DNS SRV Service Name Registry for more examples
`oAsync`	A notification object that is notified when services are located on the network or when services that had previously been reported are removed. The notification methods are not called until the `queryServices` method returns and are called during idle processing. The `oAsync` parameter should implement the following methods: **`addServices`** — This method is called when available services matching the query are located. The parameter is an array of `Service Description` objects for the services that have been added. **`removeServices`** — This method is called when services that had previously been introduced by calling the `addServices` notification method are no longer available. The parameter is an array of `Service Description` objects for the services that have been removed. **Note:** In Acrobat 7.0, only services located through mDNS (that is, in the "local." domain) are updated dynamically.
`aDomains`	(optional) An array of domains that the query should be made for. The only valid domains are: **`ServiceDiscovery.local`** — Search for services in the local networking link using Multicast DNS (mDNS). This is useful for finding network services in an *ad hoc* networking environment, but network services will only be located within the scope of the current network router. **`ServiceDiscovery.DNS`** — Search for services in the default DNS domain using unicast DNS. This is useful for locating network services in the context of a DNS server, but typically requires IS assistance to register a service and is less dynamic.

Returns

A service query object that manages the duration of the query. The query will continue until one of the following conditions is met:

- The service query object returned from `queryServices` is garbage collected.
- The `stop` method of the service query object returned from `queryServices` is called.

Method	Description
`stop`	Causes the query to terminate. This method can be called from a notification callback but the operation will not stop until idle processing time.

Exceptions

Standard Acrobat exceptions.

Service Description Object

The service description object passed to `addServices` and `removeServices` have the following properties:

Property	Description
`name`	The Unicode display name of the service.
`domain`	The DNS domain in which the service was located. If the service was located in the local networking link, the domain name will be “local”.
`type`	The DNS SRV Service Name of the service that was located – this will be the same as the `cType` parameter passed to `queryServices`. This can be useful when the same notification callback is being used for multiple queries.

Example

Locates network services that have published themselves using DNS Service Discovery.

This example code will produce different output depending on where it is run.

```
var oNotifications =
{
   addServices: function(services)
   {
      for(var i = 0; i < services.length; i++)
      console.println("ADD: "+ services[i].name + " in domain "
         + services[i].domain);
   },
   removeServices: function(services)
   {
      for(var i = 0; i < services.length; i++)
      console.println("DEL: " + services[i].name + " in domain "
         + services[i].domain);
   }
```

```
};
SOAP.queryServices({
   cType:"http",
   oAsync:oNotifications,
   aDomains:[ServiceDiscovery.local, ServiceDiscovery.DNS]
});
```

The output depends on the current network environment; if there are no services advertised by DNS Service Discovery, the example will produce no output. The following is a representative output:

```
ADD: My Web Server in domain local.
ADD: Joe's Web Server in domain local.
ADD: Example.org Web Server in domain example.org.
```

resolveService

7.0		S	

Allows a service name to be bound to a network address and port in order for a connection to be made. The connection information is returned asynchronously and should be treated as temporary since the network location of a service may change over time (for example, if a DHCP lease expires or if a service moves to a new server).

Note: Beginning with Acrobat 8.0, this method is deprecated, new services should use `Net.Discovery.resolveService`, see page 546.

Parameters

`cType`	The DNS SRV Service Name to resolve.
`cDomain`	The domain that the service was located in.
`cService`	The service name to resolve.
`oResult`	An object that will be called when the service is resolved. See "Additional notes on the oResult parameter" on page 663.

Returns

A service query object that manages the duration of the resolve. The resolve will continue until one of the following conditions is met:

- The service query object returned from `resolveService` is garbage collected.
- The `resolve` method of the `oResult` object is called indicating that the operation completed (either by resolving the service, error, or a timeout).
- The `stop` method of the service query object returned from `resolveService` is called.

Method	Description
`stop`	Causes the resolve to terminate. This method can be called from a notification callback but the operation will not stop until idle time.

Exceptions

Standard Acrobat exceptions.

Additional notes on the oResult parameter

The `oResult` object is a notification object that will be called when the service is resolved. The notification methods will not be called until the `resolveService` method returns and are called during idle processing. The `oResult` parameter should implement the following method:

Method	Description
`resolve`	This method is called with two parameters (`nStatus` and `oInfo`) when the service is resolved or if it cannot be resolved. The parameter `nStatus` is the state indicating if the service could be resolved (see below). If the service was successfully resolved, the `oInfo` object, an instance of the `ServiceInfo` object (see below), specifies the connection information.

The `nStatus` parameter passed to the resolve method can have one of the following values:

Value	Description
`0`	The service was successfully resolved.
`1`	The service timed out before being resolved. The default timeout in Acrobat 7 or later is 60 seconds.
`-1`	There was an networking error trying to resolve the service.

The `ServiceInfo` object passed to the resolve method has the following properties:

Property	Description
`target`	The IP address or DNS name of the machine supplying the service.
`port`	The port on the machine supplying the service.
`info`	An object with name - value pairs that the service has supplied. For example, in the case of an HTTP service, the path property will contain the path on the web service so that the service URL would be `http://<target>:<port>/<info["path"]>)`.

Example

This example code will produce different output depending on where it is run. If there are no services advertised by DNS Service Discovery, this example will produce no output.

```
var oNotifications =
{
   resolve: function(status, info)
   {
      if(status == 0)
         console.println("RESOLVE: http://"
            + info.target + ":" + info.port + "/"
            + info.info.path);
      else console.println("ERROR: " + status);
   }
};
SOAP.resolveService({
   cType: "http",
   cDomain: "local.",
   cService: "Joe's Web Server",
   oResult: oNotifications
});
```

The output depends on the current network environment – the following is a representative output:

```
RESOLVE: http://172.16.0.0:80/index.html
```

request

6.0			F

Initiates a remote procedure call (RPC) or sends an XML message to a SOAP HTTP endpoint. The method either waits for the endpoint to reply (synchronous processing) or calls a method on the notification object (asynchronous processing).

Note: Beginning with Acrobat 8.0, this method is deprecated, new services should use `Net.SOAP.request`, see page 545.

Parameters

`cURL`	The URL for a SOAP HTTP endpoint. The URL method must be one of: **`http`** — Connect to a server at a URI on a port. For example, http://serverName:portNumber/URI **`https`** — Connect to a secured (SSL) server at a URI on a port. For example, https://serverName:portNumber/URI
`oRequest`	An object that specifies the remote procedure name and parameters or the XML message to send. See "Additional notes on the oRequest parameter" on page 668.

`oAsync`	(optional) An object that specifies that the method invocation will occur asychronously. The default is for the request to be made synchronously. The object has been modified in Acrobat 7.0. (Acrobat 6.0) The `oAsync` object literal must have a function called `response` that will be called with two parameters (`oResult` and `cURI`) when the response returns. `oResult` is the same result object that would have been returned from the request call if it was called synchronously. `cURI` is the URI of the endpoint that the request was made to. (Acrobat 7.0) The `oAsync` object response callback has the following parameters: **`response`** — The response object from the SOAP request. **`uri`** — The URI that the SOAP request was made to. **`exception`** — An exception object (see the exceptions below) if there was an error, `null` otherwise. **`header`** — A response SOAP header (see the description of the `oRespHeader` parameter) or `null` if there are no response headers.
`cAction`	(optional) In SOAP 1.1, this parameter is passed as the SOAPAction header. In SOAP 1.2, this parameter is passed as the action parameter in the Content-Type header. The default is for the action to be an empty string. The SOAPAction is a URN written to an HTTP header used by firewalls and servers to filter SOAP requests. The WSDL file for the SOAP service or the SOAP service description will usually describe the SOAPAction header required (if any).
`bEncoded`	(optional) Encoded the request using the SOAP Encoding described in the SOAP Specification. Otherwise, the literal encoding is used. The default is `true`.
`cNamespace`	(optional) A namespace for the message schema when the request does not use the SOAP Encoding. The default is to omit the schema declaration.
`oReqHeader`	(optional, Acrobat 7.0) An object that specifies a SOAP header to be included with the request. The default is to send a request with only a SOAP Body. The object is specified in the same way as the `oRequest` object except for two additional properties that can be specified in the request description: **`soapActor`** — The recipient (or actor specified as a URI) that the SOAP header should be processed by. The default is the first recipient to process the request. **`soapMustUnderstand`** — A Boolean value indicating that the request body cannot be interpreted if this header type is not understood by the recipient. The default is that understanding the header is optional.

`oRespHeader`	(optional, Acrobat 7.0) An object that will be populated with the SOAP headers returned when the method completes if the function is being called synchronously (the header will be passed to the `oAsync` callback method otherwise). The default is for the headers not to be returned. See the description of the `cResponseStyle` parameter for the object format.
`cVersion`	(optional, Acrobat 7.0) The version of the SOAP protocol to use when generating the XML Message – either 1.1 or 1.2. The default is to use "SOAPVersion.version_1_1".
`oAuthenticate`	(optional, Acrobat 7.0) An object that specifies how to handle HTTP authentication or credentials to use for Web Service Security. The default is to present a user interface to the user to handle HTTP authentication challenges for BASIC and DIGEST authentication modes. The `oAuthenticate` object can have the following properties: **`Username`** — A string containing the user name to use for authentication. **`Password`** — A string containing the credential to use. **`UsePlatformAuth`** — A Boolean value indicating that platform authentication should be used. If `true`, `Username` and `Password` are ignored and the underlying platform networking code is used. This may cause an authentication UI to be shown to the user and/or the credentials of the currently logged in user to be used. The default is `false` and is only supported on the Windows platform.
`cResponseStyle`	(optional, Acrobat 7.0) An enumerated type indicating how the return value (in the case of the SOAP Body) and the `oRespHeader` object (in the case of a SOAP header) will be structured: **`SOAPMessageStyle.JS`** — (Default) The response will be an object describing the SOAP Body (or SOAP Header) of the returned message (this is the result that Acrobat 6.0 produced). This is recommended when using the SOAP encoding for the request but is not ideal when using the literal encoding – using the XML or Message style is better. **`SOAPMessageStyle.XML`** — The response will be a stream object containing the SOAP Body (or SOAP Header) as an XMLfragment. If there are any attachments associated with the response, the Stream object will have an object property `oAttachments`. The object keys are the unique names for the attachment parts and the value must be a Stream object containing the attachment contents. **`SOAPMessageStyle.Message`** — The response will be an object describing the SOAP Body (or SOAP Header) corresponding to the XML Message. This differs from the JavaScript response style in the following ways: • XML Elements are returned as an array of objects rather than an object to maintain order and allow elements with the same name. • XML Attributes are preserved using the `soapAttributes` property. • Namespaces are processed and returned in the `soapName` and `soapQName` properties. • The content of an element is in the `soapValue` property.

`cRequestStyle`	(optional, Acrobat 7.0.5) Allows the interpretation of `oRequest` to be altered. The following values are permitted: **`SOAPRequestStyle.SOAP`** — (the default) The request is made using the SOAP messaging model. **`SOAPRequestStyle.RawPost`** — The `oRequest` parameter is used as the request body for an HTTP Post. `oRequest` must be a `ReadStream` object. If this method is called within the context of a document, the document must be open in the browser. Additionally, the origination URL of the document (scheme, server, and port) must match the origination of the `cURL` parameter. The response is a `ReadStream` object with the response from the request.
`cContentType`	(optional, Acrobat 7.0.5) Allows the HTTP content-type header to be specified. The default is to use the SOAP messaging HTTP content-type.

Returns

A response object if the method was called synchronously (that is, there is no `oAsync` parameter) or nothing if the method was called asynchronously. See the description of `cResponseStyle` above for the object description.

The SOAP types in the result are mapped to JavaScript types as follows:

SOAP type	JavaScript type
xsd:string	String
xsd:integer	Number
xsd:float	Number
xsd:dateTime	Date
xsd:boolean	Boolean
xsd:hexBinary	`ReadStream` object
xsd:base64Binary	`ReadStream` object
SOAP-ENC:base64	`ReadStream` object
SOAP-ENC:Array	Array
No Type Information	String

Exceptions

`SOAPError` is thrown when the SOAP endpoint returns a SOAPFault. The `SOAPError` Exception object has the following properties:

Property	Description
`faultCode`	A string indicating the SOAP Fault Code for this fault.

Property	Description
`faultActor`	A string indicating the SOAP Actor that generated the fault.
`faultDetail`	A string indicating detail associated with the fault.

`NetworkError` is thrown when there is a failure from the underlying HTTPtransport layer or in obtaining a Network connection. The NetworkError Exception object has the property `statusCode`, which is an HTTP Status code or –1 if the network connection could not be made.

Standard Acrobat exceptions can also be thrown.

Note: If the method was called asynchronously, the exception object may be passed to the `response` callback method.

Additional notes on the oRequest parameter

The `oRequest` parameter is an object literal that specifies the remote procedure name and the parameters to call. The object literal uses the fully qualified method name of the remote procedure as the key. The namespace should be separated from the method name by a colon.

For example, if the namespace for the method is `http://mydomain/methods` and the method name is `echoString`, the fully qualified name would be `http://mydomain/methods:echoString`. The value of this key is an object literal, each key is a parameter of the method, and the value of each key is the value of the corresponding parameter of the method. For example:

```
oRequest: {
   "http://soapinterop.org/:echoString":{inputString: "Echo!"}
}
```

When passing parameters to a remote procedure, JavaScript types are bound to SOAP types automatically as listed in the table:

JavaScript type	SOAP type
String	xsd:string
Number	xsd:float
Date	xsd:dateTime
Boolean	xsd:boolean
`ReadStream` object	SOAP-ENC:base64
Array	SOAP-ENC:Array
Other	No type information

Note: The `xsd` namespace refers to the XML Schema Datatypes namespace `http://www.w3.org/2001/XMLSchema`. The `SOAP-ENC` namespace refers to the SOAP Encoding namespace `http://schemas.xmlsoap.org/soap/encoding/`.

The `oRequest` object supports the following properties:

Property	Description
`soapType`	The SOAP type that will be used for the value when generating the SOAP message. It is useful when a datatype is needed other than the automatic datatype binding described above. The type should be namespace qualified using the *<namespace>:<type>* notation, for example `http://mydomain/types:myType` However, the `xsd` (XMLSchema Datatypes), `xsi` (XMLSchema Instance), and SOAP-ENC (SOAP Encoding) namespaces are implicitly defined in the SOAP message, so the `soapType` can use them, as in `xsd:int` for the XMLSchema Datatype Integer type.
`soapValue`	(Acrobat 6.0) The value that will be used when generating the SOAP message. It can be a string or a `ReadStream` object. `soapValue` is passed unescaped (that is, not XML Entity escaped). For example, "<" is not converted to "<" in the XML Message. Consequently, `soapValue` can be a raw XML fragment that will be passed to the XML Message. (Acrobat 7.0) `soapValue` can now also be an array of nodes that are an ordered set of children of the node in the request message.

`soapName`	The element name that will be used when generating the SOAP message instead of the key name in the object literal.
	For example, integers are not supported in JavaScript, but an integer parameter to a SOAP method can be constructed as follows:
	`var oIntParameter = {`
	`soapType: "xsd:int",`
	`soapValue: "1"`
	`};`
	Later, the `oRequest` parameter for the `SOAP.request` method might be this:
	`oRequest: {`
	`"http://soapinterop.org/:echoInteger":`
	`{ inputInteger: oIntParameter }`
	`}`
	"Example 1" on page 670 shows this technique.

`soapAttributes`	(Acrobat 7.0) An object specifying XML attributes to be included when building the element corresponding to the request node. The object keys are the attribute names and the corresponding value is the attribute value.
`soapQName`	(Acrobat 7.0) An object specifying the namespace qualified name (QName) of the request node. For example, in the element `<ns:local xmlns:ns="urn:example.org">`, the element name is a QName consisting of a local name (`"local"`) and a namespace (`"urn:example.org"`). This object has two properties: **`localName`** — A string indicating the local name of the QName. **`nameSpace`** — A string indicating the namespace of the QName.

Property	Description
`soapAttachment`	(Acrobat 7.0) A Boolean value indicating that the `soapValue` contents of the node should be encoded as an attachment according to the SwA specification. The `soapValue` *must* be a stream if the corresponding `soapAttachment` property is `true`, otherwise an exception will be thrown.
`soapParamOrder`	(Acrobat 7.0) An array indicating the order in which RPC parameters should be sent to the server. The array is a set of strings with the parameter names. This value is only applicable when `bEncoding` is `true`.

Example 1

Use `request` to initiate a remote procedure call for echo services.

A service WSDL Document URL is needed. It can be obtained from the "Round 2 Interop Services - using SOAP 1.2" section at the following URL: http://www.whitemesa.com/interop.htm.

```
var cURL = <get a URL for this service from
     http://www.whitemesa.com/interop.htm>;

var cTestString = "This is my test string";

// Call the echoString SOAP method -- it is an RPC Encoded method
var response = SOAP.request(
{
   cURL: cURL,
   oRequest: {
      "http://soapinterop.org/:echoString": {
         inputString: cTestString
      }
   },
   cAction: "http://soapinterop.org/"
});

var result =
response["http://soapinterop.org/:echoStringResponse"]["return"];

// This should be the same as cTestString
console.println(result + " == " + cTestString);

// Call the echoInteger SOAP method -- JavaScript doesn't support
// integers so we make our own integer object.
var oTestInt =
{
   soapType: "xsd:int",
   soapValue: "10"
};

var response = SOAP.request(
{
   cURL: cURL,
   oRequest: {
      "http://soapinterop.org/:echoInteger": {
```

```
        inputInteger: oTestInt
      }
    },
    cAction: "http://soapinterop.org/"
});

var result =
response["http://soapinterop.org/:echoIntegerResponse"]["return"];

// This should be the same as oTestInt.soapValue
console.println(result + " == " + oTestInt.soapValue);
```

This produces the following output:

```
This is my test string == This is my test string
10 == 10
```

Example 2

Set a SOAP Header and gets it back.

```
var cURL = <URL of a Service>;
var NS = "http://www.example.com/soap/:";
var oHeader = {};
oHeader[NS + "testSession"] =
{
   soapType: "xsd:string",
   soapValue: "Header Test String"
};
var oResultHeader = {};
var oRequest = {};
oRequest[NS + "echoHeader"] = {};
var response = SOAP.request(
{
   cURL: cURL,
   oRequest: oRequest,
   cAction: "http://soapinterop.org/",
   oReqHeader: oHeader,
   oRespHeader: oResultHeader
});
```

Example 3

A request for echo services with HTTP Authentication.

```
var oAuthenticator =
{
   Username: "myUserName",
   Password: "myPassword"
};
var response = SOAP.request(
{
   cURL: cURL,
   oRequest: {
      "http://soapinterop.org/:echoString":
      {
```

```
            inputString: cTestString
          }
      },
      cAction: "http://soapinterop.org/",
      oAuthenticate: oAuthenticator
  });
```

response

6.0			F

Initiates a remote procedure call (RPC) or sends an XML message to a SOAP HTTP endpoint without waiting for a reply.

Note: Beginning with Acrobat 8.0, this method is deprecated, new services should use `Net.SOAP.response`, see page 545.

Parameters

`cURL`	The URL for a SOAP HTTP endpoint. The URL method must be one of these: **`http`** — Connect to a server at a URI on a port. For example, http://serverName:portNumber/URI **`https`** — Connect to a secured (SSL) server at a URI on a port. For example, https://serverName:portNumber/URI See the `cURL` parameter of `SOAP.request`.
`oRequest`	An object that specifies the remote procedure name and parameters or the XML message to send. See the `oRequest` parameter of `SOAP.request`.
`cAction`	(optional) The SOAP Action header for this request as specified by the SOAP Specification. The default is for the SOAP Action to be empty. See the `cAction` parameter of `SOAP.request`.
`bEncoded`	(optional) A Boolean value specifying whether the request was encoded using the SOAP Encoding described in the SOAP Specification. The default is `true`.
`cNamespace`	(optional) A namespace for the message schema when the request does not use the SOAP Encoding (the `bEncoded` flag is `false`). The default is to have no namespace.
`oReqHeader`	(optional, Acrobat 7.0) An object that specifies a SOAP header to be included with the request. The default is to send a request with only a SOAP Body. See the `oReqHeader` parameter of der `SOAP.request`.

`cVersion`	(optional, Acrobat 7.0) The version of the SOAP protocol to use. The default is to use "SOAPVersion.version_1_1". See the `cVersion` parameter of `SOAP.request`.
`oAuthenticate`	(optional, Acrobat 7.0) An object that specifies the type of authentication scheme to use and to provide credentials. The default is for an interactive UI to be displayed if HTTP authentication is encountered. See the `oAuthenticate` parameter of `SOAP.request`.
`cRequestStyle`	(optional, Acrobat 7.0.5) Same as `cRequestStyle` for `SOAP.request`, except that there is no response from the server.
`cContentType`	(optional, Acrobat 7.0.5) Same as `cContentType` for `SOAP.request`, except that there is no response from the server.

Returns

Boolean

Exceptions

If there is a problem at the networking level, such as an unavailable endpoint, a `NetworkError` will be thrown.

Example

See the "Example 1" on page 670.

streamDecode

6.0			

Allows the `oStream` object to be decoded with the specified encoding type, `cEncoder`. It returns a decoded `ReadStream` object. Typically, it is used to access data returned as part of a SOAP method that was encoded in Base64 or hex encoding.

Note: Beginning with Acrobat 8.0, this method is deprecated, new services should use `Net.streamDecode`, see page 547.

Parameters

`oStream`	A stream object to be decoded with the specified encoding type.
`cEncoder`	Permissible values for this string are "hex" (hex-encoded) and "base64" (Base 64-encoded).

Returns

`ReadStream` object

streamDigest

7.0			

Allows the `oStream` object to be digested with the specified encoding type, `cEncoder`. It returns a `ReadStream` object containing the computed digest of the `oStream`. Typically, this is used to compute a digest to validate the integrity of the original data stream or as part of an authentication scheme for a web service.

Note: Beginning with Acrobat 8.0, this method is deprecated, new services should use `Net.streamDigest`, see page 547.

Parameters

`oStream`	A stream object to compute the digest of, using the specified message digest algorithm.
`cEncoder`	The digest algorithm to use. The `cEncoder` parameter must be one of the following values: **`StreamDigest.MD5`** — Digest the content using the MD5 Digest Algorithm (see RFC 1321). **`StreamDigest.SHA1`** — Digest the content using the SHA-1 Digest Algorithm (see RFC 3174).

Returns

A `ReadStream` object with the binary digest of the stream. To be used as a string, the result must be converted to a text format such as Base64 or hex using `SOAP.streamEncode`.

Example

Digest a string by first converting it to a stream, then calling streamDigest.

```
var srcStm = SOAP.streamFromString("This is a string I want to digest");
var digest = SOAP.streamDigest(srcStm, StreamDigest.SHA1);
```

streamEncode

6.0			

This function encodes a stream object. Typically, it is used to pass data as part of a SOAP method when it must be encoded in Base 64 or hex encoding.

Note: Beginning with Acrobat 8.0, this method is deprecated, new services should use `Net.streamEncode`, see page 547.

Parameters

`oStream`	A stream object to be encoded with the specified encoding type.
`cEncoder`	A string specifying the encoding type. Permissible values are “hex” (for hex-encoded) and “base64” (base 64-encoded).

Returns

A `ReadStream` object that has the appropriate encoding applied.

streamFromString

6.0			

This function converts a string to a `ReadStream` object. Typically, this is used to pass data as part of a SOAP method.

Parameters

`cString`	The string to be converted.

Returns

`ReadStream` object

stringFromStream

6.0			

This function converts a `ReadStream` object to a string. Typically, this is used to examine the contents of a stream object returned as part of a response to a SOAP method.

Parameters

`oStream`	The `ReadStream` object to be converted.

Returns

String

Sound

5.0			

This object represents a sound that is stored in the document. The array of all Sound objects can be obtained from the Doc `sounds` property. See also Doc methods `getSound`, `importSound`, and `deleteSound`.

Sound properties

name

The name associated with this Sound object.

Type

String

Access

R

Example

Write the names to the console of all embedded sounds in the current document.

```
console.println("Dumping all sound objects in this document.");
var s = this.sounds;
for (var i = 0; i < this.sounds.length; i++)
   console.println("Sound[" + i + "]=" + s[i].name);
```

Sound methods

pause

Pauses the currently playing sound. If the sound is already paused, the sound play is resumed.

play

Plays the sound asynchronously.

stop

Stops the currently playing sound.

Span

6.0			

A generic object that represents a length of text and its associated properties in a rich text form field or annotation. A rich text value consists of an array of span objects representing the text and formatting.

Note: Span objects are a copy of the rich text value of the field or annotation. To modify and reset the rich text value to update the field, use the Field object `richValue` property, or the `Annotation` object property `richContents`, and the `event` object properties `richValue`, `richChange`, and `richChangeEx`.

Span properties

alignment

The horizontal alignment of the text. Alignment for a line of text is determined by the first span on the line. The values of `alignment` are

```
left
center
right
```

The default value is `left`.

Type

String

Access

R/W

Example

The example following `superscript` uses `alignment`.

fontFamily

The font family used to draw the text. It is an array of family names to be searched for in order. The first entry in the array is the font name of the font to use. The second entry is an optional generic family name to use if an exact match of the first font is not found. The generic family names are

```
symbol, serif, sans-serif, cursive, monospace, fantasy
```

The default generic family name is `sans-serif`.

Type

Array

Access

R/W

Example

Set the `defaultStyle` font family for a rich text field.

```
f = this.getField("Text1");
style = f.defaultStyle;

// If Courier Std is not found on the user's system, use a monospace font
style.fontFamily = ["Courier Std", "monospace" ];
f.defaultStyle = style;
```

fontStretch

Specifies the normal, condensed or extended face from a font family to be used to draw the text. The values of `fontStretch` are

```
ultra-condensed, extra-condensed, condensed, semi-condensed, normal,
semi-expanded, expanded, extra-expanded, ultra-expanded
```

The default value is `normal`.

Type

String

Access

R/W

fontStyle

Specifies the text is drawn with an italic or oblique font.

```
italic
normal
```

The default is `normal`.

Type

String

Access

R/W

fontWeight

The weight of the font used to draw the text. For the purposes of comparison, normal is anything under 700 and bold is greater than or equal to 700. The values of `fontWeight` are

```
100,200,300,400,500,600,700,800,900
```

The default value is 400.

Type

Number

Access

R/W

strikethrough

If `strikethrough` is `true`, the text is drawn with a strikethrough. The default is `false`.

Type

Boolean

Access

R/W

subscript

Specifies the text is subscript. If `true`, subscript text is drawn with a reduced point size and a lowered baseline. The default is `false`.

Type

Boolean

Access

R/W

superscript

Specifies the text is superscript. If `true`, superscript text is drawn with a reduced point size and a raised baseline. The default is `false`.

Type

Boolean

Access

R/W

Example

Write rich text to a rich text field using various properties. See the Field object richValue property for more details and examples.

```
var f = this.getField("myRichField");

// Create an array to hold the Span objects
var spans = new Array();

// Each Span object is an object, so we must create one
spans[0] = new Object();
spans[0].alignment = "center";
spans[0].text = "The answer is x";

spans[1] = new Object();
spans[1].text = "2/3";
spans[1].superscript = true;

spans[2] = new Object();
spans[2].superscript = false;
spans[2].text = ".  ";

spans[3] = new Object();
spans[3].underline = true;
spans[3].text = "Did you get it right?";
spans[3].fontStyle = "italic";
spans[3].textColor = color.red;

// Now assign our array of Span objects to the field using
// field.richValue
f.richValue = spans;
```

text

The text within the span.

Type

String

Access

R/W

Example

The example following `superscript` uses `text`.

textColor

A color array representing the RGB color to be used to draw the text (see the `color` object). The default color is black.

Type

Color Array

Access

R/W

Example

The example following `superscript` uses `textColor`.

textSize

The point size of the text. The value of `textSize` can be any number between 0 and 32767, inclusive. A text size of zero means to use the largest point size that will allow all text data to fit in the field's rectangle.

The default text size is 12.0.

Type

Number

Access

R/W

Example

The example following the Field object `richValue` property uses `textSize`.

underline

If `underline` is `true`, the text is underlined. The default is `false`.

Type

Boolean

Access

R/W

Example

The example following `superscript` uses `underline`.

spell

This object allows users to check the spelling of Comments and Form Fields and other spelling domains. To be able to use the `spell` object, the user must have installed the Acrobat Spelling plug-in and the spelling dictionaries.

Note: The `spell` object is not available in versions of Adobe Reader prior to 7.0. In Adobe Reader 7.0, all properties and methods—with the exception of `customDictionaryCreate`, `customDictionaryDelete` and `customDictionaryExport`—are accessible.

spell properties

available

5.0			

`true` if the `spell` object is available.

Note: For Adobe Reader, this property is available only for version 7.0 or later.

Type

Boolean

Access

R

Example

```
console.println("Spell checking available: " + spell.available);
```

dictionaryNames

5.0			

An array of available dictionary names. A subset of this array can be passed to `check`, `checkText`, and `checkWord`, and to `spellDictionaryOrder` to force the use of a specific dictionary or dictionaries and the order they should be searched.

A listing of valid dictionary names for the user's installation can be obtained by executing `spell.dictionaryNames` from the console.

Note: For Adobe Reader, this property is available only for version 7.0 or later.

Type

Array

Access

R

dictionaryOrder

5.0			

The dictionary array search order specified by the user on the Spelling Preferences panel. The Spelling plug-in will search for words first in the Doc `spellDictionaryOrder` array if it has been set for the document, followed by this array of dictionaries.

Note: For Adobe Reader, this property is available only for version 7.0 or later.

Type

Array

Access

R

domainNames

5.0			

The array of spelling domains that have been registered with the Spelling plug-in by other plug-ins. A subset of this array can be passed to `check` to limit the scope of the spell check.

Depending on the user's installation, valid domains can include:

```
Everything
Form Field
All Form Fields
Comment
All Comments
```

Note: For Adobe Reader, this property is available only for version 7.0 or later.

Type

Array

Access

R

languages

6.0			

This property returns the array of available ISO 639-2/3166-1 language/country codes. A subset of this array can be passed to the `check`, `checkText`, `checkWord`, and `customDictionaryCreate` methods, and to the Doc `spellLanguageOrder` property to force the use of a specific language or languages and the order they should be searched.

Note: For Adobe Reader, this property is available only for version 7.0 or later.

Depending on the user's installation, valid language/country codes can include codes from the following list.

Code	Description
`ca_ES`	Catalan
`cs_CZ`	Czech
`da_DK`	Danish
`nl_NL`	Dutch
`en_CA`	English – Canadian
`en_GB`	English – UK
`en_US`	English – US
`fi_FI`	Finnish
`fr_CA`	French – Canadian
`fr_FR`	French
`de_DE`	German
`de_CH`	German – Swiss
`el_GR`	Greek
`hu_HU`	Hungarian
`it_IT`	Italian
`nb_NO`	Norwegian – Bokmal
`nn_NO`	Norwegian – Nynorsk
`pl_PL`	Polish
`pt_BR`	Portuguese – Brazil
`pt_PT`	Portuguese
`ru_RU`	Russian

Code	Description
es_ES	Spanish
sv_SE	Swedish
tr_TR	Turkish

Note: In Acrobat 7.0, the entries in this array are different from the entries returned in Acrobat 6.0. On input from JavaScript, the Acrobat 6.0 ISO codes are internally mapped onto the new ISO codes in order not to break any JavaScript code developed for Acrobat 6.0. Codes are not translated on output.

Type

Array

Access

R

Example

List all available language codes.

```
console.println( spell.languages.toSource() );
```

languageOrder

6.0			

The dictionary search order as an array of ISO 639-2, 3166 language codes. It is the order specified by the user on the Spelling Preferences panel. The Spelling plug-in searches for words first in the Doc `spellLanguageOrder` array if it has been set for the document, followed by this array of languages.

Note: For Adobe Reader, this property is available only for version 7.0 or later.

Type

Array

Access

R

Example

Get a listing of the dictionary search order.

```
console.println( spell.languageOrder.toSource() );
```

spell methods

addDictionary

X	P		X

Note: Beginning with Acrobat 6.0, this method is no longer supported and always returns `false`. Use the `customDictionaryOpen` method instead.

Adds a dictionary to the list of available dictionaries.

A dictionary actually consists of four files: `DDDxxxxx.hyp`, `DDDxxxxx.lex`, `DDDxxxxx.clx`, and `DDDxxxxx.env`. The `cFile` parameter must be the device-independent path of the `.hyp` file, for example, "`/c/temp/testdict/TST.hyp`". The Spelling plug-in will look in the parent directory of the TST.hyp file for the other three files. All four file names must start with the same unique 3 characters to associate them with each other, and they must end with the dot three extensions listed above, even in Mac OS.

Parameters

`cFile`	The device-independent path to the dictionary files.
`cName`	The dictionary name used in the spelling dialog box. It can be used as the input parameter to the `check`, `checkText`, and `checkWord` methods.
`bShow`	(optional) If `true` (the default), the `cName` value is combined with "User: " that name is shown in all lists and menus. For example, if `cName` is "Test", "User: Test" is added to all lists and menus. If `false`, this custom dictionary is not shown in any lists or menus.

Returns

`false`

addWord

5.0	P	S	

Adds a new word to a dictionary. See also the `removeWord`.

Note: Beginning with Acrobat 7.0, this method is allowed only during a console or batch event. See "Privileged versus non-privileged context" on page 32 for details.

Internally, the `spell` object scans the user "Not-A-Word" dictionary and removes the word if it is listed there. Otherwise, the word is added to the user dictionary. The actual dictionary is not modified.

For Adobe Reader, this property is available only for version 7.0 or later.

Parameters

`cWord`	The new word to add.
`cName`	(optional) The dictionary name or language code. An array of the currently installed dictionaries can be obtained using `dictionaryNames` or `languages`.

Returns

`true` if successful, otherwise, `false`.

check

5.0			

Presents the Spelling dialog box to allow the user to correct misspelled words in form fields, annotations, or other objects.

Note: For Adobe Reader, this property is available only for version 7.0 or later.

Parameters

`aDomain`	(optional) An array of Doc that should be checked by the Spelling plug-in, for example, form fields or comments. When you do not supply an array of domains, the "EveryThing" domain will be used. An array of the domains that have been registered can be obtained using the `domainNames` property.
`aDictionary`	(optional) The array of dictionary names or language codes that the spell checker should use. The order of the dictionaries in the array is the order the spell checker will use to check for misspelled words. An array of the currently installed dictionaries can be obtained using `spell.dictionaryNames` or `spell.languages`. When this parameter is omitted, the `spellDictionaryOrder` list will be searched followed by the `dictionaryOrder` list.

Returns

`true` if the user changed or ignored all the flagged words. When the user dismisses the dialog box before checking everything, the method returns `false`.

Example

Set the dictionaries, then spell check the comments and form fields of the current document. Reports back to the console.

```
var dictionaries = ["de", "French", "en-GB"];
var domains = ["All Form Fields", "All Annotations"];
if (spell.check(domains, dictionaries) )
   console.println("You get an A for spelling.");
else
   console.println("Please spell check this form before you submit.");
```

checkText

5.0			

Presents the spelling dialog box to allow the user to correct misspelled words in the specified string.

Note: For Adobe Reader, this property is available only for version 7.0 or later.

Parameters

`cText`	The string to check.
`aDictionary`	(optional) The array of dictionary names or language codes that the spell checker should use. The order of the dictionaries in the array is the order the spell checker will use to check for misspelled words. An array of installed dictionaries can be obtained using `spell.dictionaryNames` or `spell.languages`. When this parameter is omitted, the `spellDictionaryOrder` list will be searched followed by the `dictionaryOrder` list.

Returns

The result from the spelling dialog box in a new string.

Example

Spell check a particular field, and update the spelling in the field.

```
var f = this.getField("Text Box")   // A form text box
f.value = spell.checkText(f.value); // Let the user pick the dictionary
```

checkWord

5.0			

Checks the spelling of a specified word.

Note: For Adobe Reader, this property is available only for version 7.0 or later.

Parameters

`cWord`	The word to check.
`aDictionary`	(optional) The array of dictionary names or language codes that the spell checker should use, to check for misspelled words. The spell checker uses the dictionaries in the order they appear in the array. An array of installed dictionaries can be obtained using `spell.dictionaryNames` or `spell.languages`. If this parameter is omitted, the `spellDictionaryOrder` list is searched, followed by the `dictionaryOrder` list.

Returns

A `null` object if the word is correct, otherwise an array of alternative spellings for the unknown word.

Example 1

Insert the array of suggested alternative spellings into a list box.

```
var word = "subpinna"; /* misspelling of "subpoena" */
var dictionaries = ["English"];
var f = this.getField("Alternatives") // Alternative spellings list box
f.clearItems();
f.setItems(spell.checkWord(word, dictionaries));
```

Example 2

The following script marks misspelled words in the document with a squiggle annotation whose contents are the suggested alternative spellings. The script can be executed from the console, as a mouse-up action within the document, a menu, or as a batch sequence.

```
var ckWord, numWords;
for (var i = 0; i < this.numPages; i++ )
{
   numWords = this.getPageNumWords(i);
   for (var j = 0; j < numWords; j++)
   {
      ckWord = spell.checkWord(this.getPageNthWord(i, j))
      if ( ckWord != null )
      {
         this.addAnnot({
            page: i,
            type: "Squiggly",
            quads: this.getPageNthWordQuads(i, j),
            author: "A. C. Acrobat",
            contents: ckWord.toString()
         });
      }
   }
}
```

customDictionaryClose

6.0			

Closes a custom dictionary that was opened using `customDictionaryOpen` or `customDictionaryCreate`.

Note: For Adobe Reader, this property is available only for version 7.0 or later.

Parameters

`cName`	Dictionary name used when this dictionary was opened or created.

Returns

`true` if successful, `false` on failure.

customDictionaryCreate

6.0		S	X

Use this method to create a new custom dictionary file and add it to the list of available dictionaries.

Note: This method is allowed only during a console or batch event. See "Privileged versus non-privileged context" on page 32 for details.

Parameters

`cName`	Dictionary name used in the spelling dialog box. It can be used as the input parameter to `check`, `checkText`, and `checkWord` methods.
`cLanguage`	(optional) Use this parameter to associate this dictionary with a language. A list of available languages can be obtained from the spell.languages property.
`bShow`	(optional) If `true` (the default), the `cName` parameter is combined with "User: " and shown that name in all lists and menus. For Example, if `cName` is "Test", "User: Test" is added to all lists and menus. When `bShow` is `false`, this custom dictionary is not shown in any lists or menus.

Returns

`true` if successful, `false` on failure. This method will fail if the user does not have read and write permission to this directory.

Example

Open this document, the *JavaScript for Acrobat API Reference*, in Acrobat and execute the following script in the console. This script extracts the first word of each bookmark. If that word is already in a dictionary, it is discarded. An unknown word—assumed to be the name of a JavaScript object, property or method—is added into a newly created dictionary called "JavaScript".

```
spell.customDictionaryCreate("JavaScript", "en", true);
function GetJSTerms(bm, nLevel)
{
   var newWord = bm.name.match(re);
   var ckWord = spell.checkWord( newWord[0] );
   if ( ckWord != null )
   {
      var cWord = spell.addWord( newWord[0], "JavaScript");
      if ( cWord )  console.println( newWord[0] );
   }
   if (bm.children != null)
   for (var i = 0; i < bm.children.length; i++)
   GetJSTerms(bm.children[i], nLevel + 1);
}
```

```
console.println("\nAdding New words to the \"JavaScript\" "
   + "dictionary:");
var re = /^\w+/;
GetJSTerms(this.bookmarkRoot, 0);
```

customDictionaryDelete

6.0		S	X

Use this method to close and delete a custom dictionary file that was opened by `customDictionaryOpen` or `customDictionaryCreate`.

Note: This method is allowed only during a console or batch event. See "Privileged versus non-privileged context" on page 32 for details.

Parameters

`cName`	The name of the dictionary to be deleted. This is the name used when this dictionary was opened or created.

Returns

`true` if successful, `false` on failure. This method will fail if the user does not have sufficient file system permission.

Example

Delete a custom dictionary.

```
spell.customDictionaryDelete("JavaScript");
```

customDictionaryExport

6.0		S	X

Exports a custom dictionary to a new file that was opened using the spell methods `customDictionaryOpen` or `customDictionaryCreate`.

The user is prompted for an export directory, where the custom dictionary is saved as a `.clam` file using the dictionary name and language specified in `customDictionaryCreate`. For example, if the dictionary name is "JavaScript" and the "en" language as specified when it was created, the export file name will be `JavaScript-eng.clam`.

Exported custom dictionaries can be used in subsequent `customDictionaryOpen` calls.

Note: This method is allowed only during a console or batch event. See "Privileged versus non-privileged context" on page 32 for details.

Parameters

`cName`	The dictionary name used when this dictionary was opened or created.

Returns

`true` if successful, `false` on failure. This method will fail if the user does not have sufficient file system permission.

Example

Export a custom dictionary, which can then be sent to other users. (See the example that follows `customDictionaryCreate`.)

```
spell.customDictionaryExport("JavaScript");
```

customDictionaryOpen

6.0			

Adds a custom export dictionary to the list of available dictionaries. See `customDictionaryExport`.

Note: A custom dictionary file can be created using the `customDictionaryCreate` and `customDictionaryExport` methods.

For Adobe Reader, this property is available only for version 7.0 or later.

Parameters

`cDIPath`	The device-independent path to the custom dictionary file.
`cName`	Dictionary name used in the spelling dialog box. It can be used as the input parameter to `check`, `checkText`, and `checkWord` methods.
`bShow`	(optional) If `true`, the default, the `cName` parameter is combined with "User: " and that name is shown in all lists and menus. For example, if `cName` is "Test", add "User: Test" is added to all lists and menus. When `bShow` is `false`, this custom dictionary is not shown in any lists or menus.

Returns

`true` if successful, `false` on failure. This method fails if the user does not have read permission for the file.

Example

This example continues the ones following `customDictionaryCreate` and `customDictionaryExport`. It adds a custom export dictionary to the list of available dictionaries.

The user places the custom export dictionary in any folder for which there is read/write permission. A particular choice is the user `dictionaries` folder, whose location of can be obtained from the `app.getPath` method.

```
app.getPath("user", "dictionaries");
```

After the export dictionary has been placed, listing it can be made automatic by adding some folder-level JavaScript. The path to the user JavaScripts folder can be obtained by executing

```
app.getPath("user", "javascript");
```

Finally, create a `.js` file in this folder and add the line

```
var myDictionaries = app.getPath("user", "dictionaries");
spell.customDictionaryOpen( myDictionaries, "JavaScripts", true);
```

The next time Acrobat is started, the "JavaScript" dictionary will be open and available.

ignoreAll

6.0			

Adds or removes a word from the Spelling ignored-words list of the current document.

Note: For Adobe Reader, this property is available only for version 7.0 or later.

Parameters

`cWord`	The word to be added or removed from the ignored list.
`bIgnore`	(optional) If `true` (the default), the word is added to the document ignored word list; if `false`, the word is removed from the ignored list.

Returns

`true` if successful. This method throws an exception if no document is open.

Example

```
var bIgnored = spell.ignoreAll("foo");
if (bIgnored) console.println("\"foo\" will be ignored);
```

removeDictionary

✗	Ⓟ		✗

Note: Beginning with Acrobat 6.0, this method is no longer supported. The return value of this method is always `false`. Use the `customDictionaryClose` method.

Removes a user dictionary that was added with `addDictionary`.

Parameters

`cName`	The name of the dictionary to remove. Must be the same name as was used with `addDictionary`.

Returns

`false`

removeWord

5.0	P	S	

Removes a word from a dictionary. Words cannot be removed from user dictionaries that were created using either `customDictionaryCreate` or `customDictionaryExport`.

See also `addWord`.

Note: Internally, the `spell` object scans the user dictionary and removes the previously added word if it is there. Otherwise, the word is added to the user's "Not-A-Word" dictionary. The actual dictionary is not modified.

For Adobe Reader, this property is available only for version 7.0 or later.

As of Acrobat 8.1, this method is only permitted to execute through the console or in a batch process.

Parameters

`cWord`	The word to remove.
`cName`	(optional) The dictionary name or language code. An array of installed dictionaries can be obtained using `dictionaryNames` or `languages`.

Returns

`true` if successful, `false` otherwise

userWords

5.0			

Gets the array of words a user has added to, or removed from, a dictionary. See also `addWord` and `checkWord`.

Note: For Adobe Reader, this property is available only for version 7.0 or later.

Parameters

`cName`	(optional) The dictionary name or language code. An array of installed dictionaries can be obtained using `dictionaryNames` or `languages`. If `cName` is not specified, the default dictionary is used. The default dictionary is the first dictionary specified in the Spelling preferences dialog box.
`bAdded`	(optional) If `true`, return the user's array of added words. If `false`, return the user's array of removed words. The default is `true`.

Returns

The user's array of added or removed words.

Example

List the words added to the "JavaScript" dictionary. (See the example that follows the description of `customDictionaryCreate`.)

```
var aUserWords = spell.userWords({cName: "JavaScript"});
aUserWords.toSource();
```

Statement

5.0			X

This object is used to execute SQL updates and queries and retrieve the results of these operations. To create a Statement object, use `connection.newStatement`.

See also:

- `Connection` object
- `ADBC` object
- `Column` object, `ColumnInfo` object, `Row` object, `TableInfo` object

Statement properties

columnCount

The number of columns in each row of results returned by a query. It is undefined in the case of an update operation.

Type

Number

Access

R

rowCount

The number of rows affected by an update. It is *not* the number of rows returned by a query. Its value is undefined in the context of a query.

Type

Number

Access

R

Statement methods

execute

Executes an SQL statement through the context of the Statement object. On failure, `execute` throws an exception.

Note: There is no guarantee that a client can do anything on a statement if an execute has neither failed nor returned all of its data.

Parameters

`cSQL`	The SQL statement to execute.

Example

Script to demonstrate various techniques for using the `execute` method.

Select all fields from the `ClientData` database.

```
statement.execute("Select * from ClientData");
```

If the name of the database table or column contains spaces, they must be enclosed in escaped quotes. For example:

```
var execStr1 = "Select firstname, lastname, ssn from \"Employee Info\"";
var execStr2 = "Select \"First Name\"  from \"Client Data\"";
statement.execute(execStr1);
statement.execute(execStr2);
```

A cleaner solution is to enclose the whole SQL string with single quotes, so that table and column names can be enclosed with double quotes:

```
var execStr3 = 'Select "First Name","Second Name" from "Client Data" ';
statement.execute(execStr3);
```

See `getRow` and `nextRow` for extensive examples.

getColumn

Obtains a `Column` object representing the data in the specified column.

Note: After a column is retrieved with one of these methods, future calls attempting to retrieve the same column may fail.

Parameters

`nColumn`	The column from which to get the data. It may be a column number or a string containing the name of the column (see the `ColumnInfo` object).
`nDesiredType`	(optional) Which of the `ADBC` JavaScript Types best represents the data in the column.

Returns

A `Column` object representing the data in the specified column, or `null` on failure.

getColumnArray

Obtains an array of `Column` objects, one for each column in the result set. A best guess is used to decide which of the `ADBC` JavaScript Types best represents the data in the column.

Note: Once a column is retrieved with one of these methods, future calls attempting to retrieve the same column may fail.

Returns

An array of `Column` objects, or `null` on failure, as well as a zero-length array.

getRow

Obtains a `Row` object representing the current row. This object contains information from each column. As for `getColumnArray`, column data is captured in the "best guess" format.

A call to `nextRow` should precede a call to `getRow`. Calling `getRow` twice, without an intervening call to `nextRow`, returns `null` for the second `getRow` call.

Returns

A `Row` object.

Example 1

Every `Row` object contains a property for each column in a row of data. Consider the following example:

```
var execStr = "SELECT firstname, lastname, ssn FROM \"Employee Info\"";
statement.execute(execStr);
statement.nextRow();
row = statement.getRow();
console.println("The first name of the first person retrieved is: "
   + row.firstname.value);
console.println("The last name of the first person retrieved is: "
   + row.lastname.value);
console.println("The SSN of the first person retrieved is: "
   + row.ssn.value);
```

Example 2

If the column name contains spaces, the above syntax for accessing the row properties (for example, `row.firstname.value`) does not work. Alternatively,

```
Connect = ADBC.newConnection("Test Database");
statement = Connect.newStatement();
var execStr = 'Select  "First Name","Second Name"  from "Client Data" ';
statement.execute(execStr);
statement.nextRow();

// Populate this PDF file
this.getField("name.first").value = row["First Name"].value;
this.getField("name.last").value = row["Second Name"].value;
```

nextRow

Obtains data about the next row of data generated by a previously executed query. This must be called following a call to `execute` to acquire the first row of results.

Returns

Nothing. Throws an exception on `failure` (if, for example, there is no next row).

Example

The following example is a rough outline of how to create a series of buttons and document-level JavaScripts to browse a database and populate a PDF form.

For the `getNextRow` button, defined below, the `nextRow` method is used to retrieve the next row from the database, unless there is an exception thrown (indicating that there is no next row), in which case, we reconnect to the database and use `nextRow` to retrieve the first row of data (again).

```
/* Button Script */
// getConnected button
if (getConnected())
   populateForm(statement.getRow());

// a getNextRow button
try {
   statement.nextRow();
}catch(e){
   getConnected();
}
var row = statement.getRow();
populateForm(row);

/* Document-level JavaScript */
// getConnected() Doc Level JS
function getConnected()
{
   try  {
      ConnectADBCdemo = ADBC.newConnection("ADBCdemo");
      if (ConnectADBCdemo == null)
```

```
        throw "Could not connect";
      statement = ConnectADBCdemo.newStatement();
      if (statement == null)
        throw "Could not execute newStatement";
      if (statement.execute("Select * from ClientData"))
        throw "Could not execute the requested SQL";
      if (statement.nextRow())
        throw "Could not obtain next row";
      return true;
    } catch(e) {
      app.alert(e);
      return false;
    }
}
// populateForm()
/* Maps the row data from the database, to a corresponding text field
in the PDF file. */
function populateForm(row)
{
   this.getField("firstname").value = row.FirstName.value;
   this.getField("lastname").value = row.LastName.value;
   this.getField("address").value = row.Address.value;
   this.getField("city").value = row.City.value;
   this.getField("state").value = row.State.value;
   this.getField("zip").value = row.Zipcode.value;
   this.getField("telephone").value = row.Telephone.value;
   this.getField("income").value = row.Income.value;
}
```

TableInfo

This generic JavaScript object contains basic information about a table. It is returned by `connection.getTableList` and contains the following properties.

Property	Type	Access	Description
`name`	String	R	The identifying name of a table. This string can be used in SQL statements to identify the table that the TableInfo object is associated with.
`description`	String	R	A string that contains database-dependent information about the table.

Template

Template objects are named pages within the document. These pages may be hidden or visible and can be copied or spawned. They are typically used to dynamically create content (for example, to add pages to an invoice on overflow).

See also the Doc `templates` property, and `createTemplate`, `getTemplate`, and `removeTemplate` methods.

Template properties

hidden

5.0	D		X

Determines whether the template is hidden. Hidden templates cannot be seen by the user until they are spawned or are made visible. When an invisible template is made visible, it is appended to the document.

This property behaves as follows in Adobe Reader:

- Setting this property in versions of Adobe Reader earlier than 5.1 generates an exception.
- For Adobe Reader 5.1 and 6.0, setting this property depends on Advanced Forms Feature document rights.
- For Adobe Reader 7.0, this property cannot be set under any circumstances.

Type

Boolean

Access

R/W

name

5.0			

The name of the template that was supplied when the template was created.

Type

String

Access

R

Template methods

spawn

5.0	D		F

Creates a new page in the document based on the template.

Parameters

`nPage`	(optional) The 0-based index of the page number after which or on which the new page will be created, depending on the value of `bOverlay`. The default is 0.
`bRename`	(optional) Specifies whether form fields on the page should be renamed. The default is `true`.
`bOverlay`	(optional) If `true` (the default), the template is overlaid on the specified page. If `false`, it is inserted as a new page before the specified page. To append a page to the document, set `bOverlay` to `false` and set `nPage` to the number of pages in the document. **Note:** For certified documents or documents with "Advanced Form Features rights"), the `bOverlay` parameter is disabled. A template cannot be overlaid for these types of documents.
`oXObject`	(optional, Acrobat 6.0) The value of this parameter is the return value of an earlier call to `spawn`.

Returns

Prior to Acrobat 6.0, this method returned nothing. Now, `spawn` returns an object representing the page contents of the page spawned. This return object can then be used as the value of the optional parameter `oXObject` for subsequent calls to `spawn`.

Note: Repeatedly spawning the same page can cause a large increase in the file size. To avoid this problem, `spawn` now returns an object that represents the page contents of the spawned page. This return value can be used as the value of the `oXObject` parameter in subsequent calls to the `spawn` method to spawn the same page.

Example 1

Spawn all templates and appends them one by one to the end of the document.

```
var a = this.templates;
for (i = 0; i < a.length; i++)
   a[i].spawn(this.numPages, false, false);
```

Example 2 (Acrobat 6.0)

Spawn the same template 31 times using the `oXObject` parameter and return value. Using this technique avoids overly inflating the file size.

```
var t = this.templates;
var T = t[0];
var XO = T.spawn(this.numPages, false, false);
for (var i=0; i<30; i++) T.spawn(this.numPages, false, false, XO);
```

Thermometer

6.0			

This object is a combined status window and progress bar that indicates to the user that a lengthy operation is in progress. To acquire a Thermometer object, use `app.thermometer`.

Example

This example shows how to use all properties and methods of the Thermometer object.

```
var t = app.thermometer;           // Acquire a thermometer object
t.duration = this.numPages;
t.begin();
for ( var i = 0; i < this.numPages; i++)
{
   t.value = i;
   t.text = "Processing page " + (i + 1);
   if (t.cancelled) break;         // Break if the operation is cancelled
   ... process the page ...
}
t.end();
```

Thermometer properties

cancelled

Specifies whether the user wants to cancel the current operation. The user can indicate the desire to terminate the operation by pressing the Esc key on the Windows and UNIX platforms and Command-period on the Mac OS platform.

Type

Boolean

Access

R

duration

Sets the value that corresponds to a full thermometer display. The thermometer is subsequently filled in by setting its `value`. The default duration is 100.

Type

Number

Access

R/W

text

Sets the text string that is displayed by the thermometer.

Type

String

Access

R/W

value

Sets the current value of the thermometer and updates the display. The value can range from 0 (empty) to the value set in `duration`. For example, if the thermometer's duration is 10, the current value must be between 0 and 10, inclusive. If the value is less than zero, it is set to zero. If the value is greater than `duration`, it is set to `duration`.

Type

Number

Access

R/W

Thermometer methods

begin

Initializes the thermometer and displays it with the current value as a percentage of the duration.

Example

Count the words on each page of the current document, report the running total, and use the thermometer to track progress.

```
var t = app.thermometer; // acquire a thermometer object
t.duration = this.numPages;
t.begin();
var cnt=0;
for ( var i = 0; i < this.numPages; i++)
{
   t.value = i;
   t.text = "Processing page " + (i + 1);
   cnt += getPageNumWords(i);
   console.println("There are " + cnt + "words in this doc.");
   if (t.cancelled) break;
}
t.end();
```

end

Draws the thermometer with its current value set to the thermometer's duration (a full thermometer), then removes the thermometer from the display.

this

In JavaScript, the special keyword `this` refers to the current object. In Acrobat, the current object is defined as follows:

- In an object method, it is the object to which the method belongs.
- In a constructor function, it is the object being constructed.
- In a document-level script or field-level script, it is the Doc and therefore can be used to set or get document properties and functions.
- In a function defined in one of the folder-level JavaScripts files, it is undefined. Calling functions should pass the Doc to any function at this level that needs it.

For example, assume that the following function was defined at the plug-in folder level:

```
function PrintPageNum(doc)
{  /* Print the current page number to the console. */
   console.println("Page = " + doc.pageNum);
}
```

The following script outputs the current page number to the console twice and then prints the page:

```
/* Must pass the Doc. */
PrintPageNum(this);
/* Same as the previous call. */
console.println("Page = " + this.pageNum);
/* Prints the current page. */
this.print(false, this.pageNum, this.pageNum);
```

Variables and functions that are defined in scripts are parented off of the `this` object. For example:

```
var f = this.getField("Hello");
```

is equivalent to

```
this.f = this.getField("Hello");
```

with the exception that the variable `f` can be garbage collected at any time after the script is run.

Variable and function name conflicts

JavaScript programmers should avoid using property and method names from the Doc as variable names. Using method names after the reserved word `var` will throw an exception, as the following line shows:

```
var getField = 1; // TypeError: redeclaration of function getField
```

Use of property names will not throw an exception, but the value of the property may not be altered if the property refers to an object:

```
// "title" will return "1", but the document will now be named "1".
var title = 1;

// Property not altered, info still an object
var info = 1; // "info" will return [object Info]
```

The following is an example of avoiding variable name clash.

```
var f = this.getField("mySignature"); // uses the ppklite sig handler

// Use "Info" rather than "info" to avoid a clash
var Info = f.signatureInfo();

// Some standard signatureInfo properties
console.println("name = " + Info.name);
```

TTS

4.05			

The JavaScript `TTS` object allows users to transform text into speech. To be able to use the `TTS` object, the user's computer must have a Text-To-Speech engine installed on it. The Text-To-Speech engine will render text as digital audio and then speak it. It has been implemented mostly with accessibility in mind but can potentially have many other applications.

This object is currently a Windows-only feature and requires that the Microsoft Text-to-Speech engine be installed in the operating system.

The `TTS` object is present on both the Windows and Mac OS platforms (since it is a JavaScript object). However, it is disabled on Mac OS.

Note: Acrobat 5.0 has taken a very different approach to providing accessibility for disabled users by integrating directly with popular screen readers. Therefore, some of the screen reading features defined in 4.05 using the TTS object have been removed in 5.0 because they conflict with the screen reader. The TTS object remains, however, because it still has useful functionality in its own right that might be popular for multimedia documents.

TTS properties

available

`true` if the TTS object is available and the Text-To-Speech engine can be used.

Type

Boolean

Access

R

Example

```
console.println("Text to speech available: " + tts.available);
```

numSpeakers

The number of speakers available to the Text-To-Speech engine. See also the `speaker` property and the `getNthSpeakerName` method.

Type

Integer

Access

R

pitch

Sets the baseline pitch for the voice of a speaker. The valid range for pitch is from 0 to 10, with 5 being the default for the mode.

Type

Integer

Access

R/W

soundCues

✖			

Deprecated. Returns `false`.

Type

Boolean

Access

R/W

speaker

Allows users to specify different speakers with different tone qualities when performing text-to-speech. See also the `numSpeakers` property and the `getNthSpeakerName` method.

Type

String

Access

R/W

speechCues

Deprecated. Returns `false`.

Type

Boolean

Access

R/W

speechRate

Sets the speed at which text will be spoken by the Text-To-Speech engine. The value for `speechRate` is expressed in number of words per minute.

Type

Integer

Access

R/W

volume

Sets the volume for the speech. Valid values are 0 (mute) to 10 (loudest).

Type

Integer

Access

R/W

TTS methods

getNthSpeakerName

Gets the *n*th speaker name in the Text-To-Speech engine (see also the `numSpeakers` and `speaker` properties).

Parameters

`nIndex`	The index of the desired speaker name.

Returns

The name of the specified speaker.

Example

Enumerate through all of the speakers available.

```
for (var i = 0; i < tts.numSpeakers; i++) {
   var cSpeaker = tts.getNthSpeakerName(i);
   console.println("Speaker[" + i + "] = " + cSpeaker);
   tts.speaker = cSpeaker;
   tts.qText ("Hello");
   tts.talk();
}
```

pause

Immediately pauses text-to-speech output on a TTS object. Playback of the remaining queued text can be resumed by calling `resume`.

qSilence

Queues a period of silence into the text.

Parameters

`nDuration`	The amount of silence in milliseconds.

qSound

Puts the specified sound into the queue to be performed by `talk`. It accepts one parameter, `cSound`, from a list of possible sound cue names. These names map directly to sound files stored in the SoundCues folder, if it exists.

```
tts.qSound("DocPrint");      // Plays DocPrint.wav
```

The SoundCues folder should exist at the program level for the viewer, for example, `C:\Program Files\Adobe\`Acrobat `5.0\SoundCues`.

Note: Windows only—`qSound` can handle only 22 KHz,16-bit PCM .wav files. These should be at least 1 second long to avoid a queue delay problem in MS SAPI. If the sound lasts less than 1 second, it should be edited and have a silence added to the end of it.

Parameters

`cSound`	The sound cue name to use.

qText

Puts text into the queue to be performed by `talk`.

Parameters

`cText`	The text to convert to speech.

Example

```
tts.qText("Hello, how are you?");
```

reset

Stops playback of queued text and flushes the queue. It also resets all the properties of the TTS object to their default values. Text playback cannot be resumed with `resume`.

resume

Resumes playback of text on a paused TTS object.

stop

Stops playback of queued text and flushes the queue. Playback of text cannot be resumed with `resume`.

talk

Sends whatever is in the queue to be spoken by the Text-To-Speech engine. If text output had been paused, `talk` resumes playback of the queued text.

Example

```
tts.qText("Hello there!");
tts.talk();
```

util

A static JavaScript object that defines a number of utility methods and convenience functions for string and date formatting and parsing.

util methods

crackURL

7.0.5			

Breaks a URL into its component parts.

Parameters

`cURL`	A string specifying the URL.

Returns

An object containing the following properties:

Property	Description
`cScheme`	The scheme of the URL. It may be `file`, `http` or `https`.
`cUser`	(Optional) The user name specified in the URL.
`cPassword`	(Optional) The password specified in the URL.
`cHost`	The hostname of the URL.
`nPort`	The port number of the URL.
`cPath`	(Optional) The path portion of the URL.
`cParameters`	(Optional) The parameter string portion of the URL.
`cFragments`	(Optional) The fragments of the URL.

This method throws a parameter error if the parameter is missing, the URL is not well-formed, or the URL scheme is not `file`, `http`, or `https`.

Example

The following code

```
util.crackURL("http://example.org/myPath?name0=value0&name1=value1#frag");
```

would return

```
{
   cScheme: "http",
   cHost: "example.org",
   nPort: 80,
   cPath: "/myPath",
   cParameters: "?name0=value0&name1=value1",
   cFragments: "frag"
}
```

iconStreamFromIcon

7.0			

Converts an XObject-based `Icon` object into an `Icon Stream` object.

Parameters

`oIcon`	An `Icon` object to be converted into an `Icon Stream` object.

Returns

`Icon Stream` object

This method allows an icon obtained from the Doc `importIcon` or `getIcon` methods to be used in a method such as `app.addToolButton`, which would otherwise accept only an `Icon Stream` object as an input parameter.

Example

Import an icon into the document-level named icons tree and add a toolbutton to the application.

```
this.importIcon("myIcon", "/C/temp/myIcon.jpg", 0);
var oIcon = util.iconStreamFromIcon(this.getIcon("myIcon"));
app.addToolButton({
   cName: "myButton",
   oIcon: oIcon,
   cExec: "console.println('My Button!');",
   cTooltext: "My button!",
   nPos: 0
});
```

printd

3.01			

Returns a date using a specified format.

Parameters

`cFormat`	The date and time format. It can be one of the following types: • A string that is a pattern of supported substrings that are place-holders for date and time data. Recognized date and time strings are shown in the table below. • Beginning with Acrobat 5.0, a number specifying the format. Supported values (along with examples of each format) are: `0` — PDF date format. Example: D:20000801145605+07'00' `1` — Universal. Example: D:20000801145605+07'00' `2` — Localized string. Example: 2000/08/01 14:56:05 • Beginning with Acrobat 7.0, if `bXFAPicture` is `true`, this parameter is interpreted using the XFA Picture Clause format.
`oDate`	A Date object to format. Date objects can be obtained from the `Date` constructor of core JavaScript or from the `util.scand` method.
`bXFAPicture`	(optional, Acrobat 7.0) A Boolean value specifying whether the value of `cFormat` is interpreted using the XFA Picture Clause format, which gives extensive support for localized times and dates. See the sections on date and time pictures in *XFA Specification, Version 2.2,* for additional discussion. (See "Related documentation" on page 28.) The default is `false`.

Returns

The formatted date string.

cFormat String Patterns

String	Effect	Example
mmmm	Long month	September
mmm	Abbreviated month	Sep
mm	Numeric month with leading zero	09
m	Numeric month without leading zero	9
dddd	Long day	Wednesday
ddd	Abbreviated day	Wed

String	Effect	Example
dd	Numeric date with leading zero	03
d	Numeric date without leading zero	3
yyyy	Long year	1997
yy	Abbreviated Year	97
HH	24 hour time with leading zero	09
H	24 hour time without leading zero	9
hh	12 hour time with leading zero	09
h	12 hour time without leading zero	9
MM	minutes with leading zero	08
M	minutes without leading zero	8
ss	seconds with leading zero	05
s	seconds without leading zero	5
tt	am/pm indication	am
t	single digit am/pm indication	a
j	Japanese Emperor Year (abbreviated) **Note:** Introduced in Acrobat 6.0. In Acrobat 7.0, this format string has been deprecated in favor of the XFA Picture Clause format.	
jj	Japanese Emperor Year **Note:** Introduced in Acrobat 6.0. In Acrobat 7.0, this format string has been deprecated in favor of the XFA Picture Clause format.	
\	use as an escape character	

Example 1

Format the current date in long format:

```
var d = new Date();
console.println("Today is " + util.printd("mmmm dd, yyyy", d));
```

Example 2 (Acrobat 5.0)

Display the date in a local format

```
console.println(util.printd(2, new Date() ));
```

Example 3 (Acrobat 7.0)

Use the XFA-Picture Clause to write the current date to the console.

```
// Execute in console
console.println(
   util.printd("EEE, 'the' D 'of' MMMM, YYYY", new Date(), true));
// The output on this day is
Tue, the 13 of July, 2004
```

Locale-Sensitive Picture Clauses. Normally processing of picture clauses occurs in the ambient locale. It is possible, however, to indicate that picture processing be done in a specific locale. This is of use when formatting or parsing data that is locale-specific and different from the ambient locale. The syntax for this extension to compound picture clauses is:

```
category-name(locale-name){picture-symbols}
```

The code executed in the console,

```
util.printd("date(fr){DD MMMM, YYYY}", new Date(), true)
```

yields the output on this day,

```
13 juillet, 2004
```

The XFA-Picture Clause gives extensive support for Chinese, Chinese (Taiwan), Japanese, and Korean (CCJK) times and dates. The example below, a custom format script of a text field, gives the current date formatted for a Japanese locale.

```
event.value = util.printd("date(ja){ggYY/M/D}", new Date(), true)
```

printf

3.01			

Formats one or more arguments as a string according to a format string. It is similar to the C function of the same name. This method converts and formats incoming arguments into a result string according to a format string (`cFormat`).

The format string consists of two types of objects:

- Ordinary characters, which are copied to the result string.
- Conversion specifications, each of which causes conversion and formatting of the next successive argument to `printf`.

Each conversion specification is constructed as follows:

```
%[,nDecSep][cFlags][nWidth][.nPrecision]cConvChar
```

The following table describes the components of a conversion specification.

`nDecSep`	A comma character (`,`) followed by a digit that indicates the decimal/separator format: **`0`** — Comma separated, period decimal point **`1`** — No separator, period decimal point **`2`** — Period separated, comma decimal point **`3`** — No separator, comma decimal point
`cFlags`	Only valid for numeric conversions and consists of a number of characters (in any order), which will modify the specification: **`+`** — Specifies that the number will always be formatted with a sign. **`space`** — If the first character is not a sign, a space will be prefixed. **`0`** — Specifies padding to the field with leading zeros. **`#`** — Specifies an alternate output form. For `f`, the output will always have a decimal point.
`nWidth`	A number specifying a minimum field width. The converted argument is formatted to be at least this many characters wide, including the sign and decimal point, and may be wider if necessary. If the converted argument has fewer characters than the field width, it is padded on the left to make up the field width. The padding character is normally a space, but is 0 if the zero padding flag is present (`cFlags` contains `0`).
`nPrecision`	A period character (`.`) followed by a number that specifies the number of digits after the decimal point for float conversions.
`cConvChar`	Indicates how the argument should be interpreted: **`d`** — Integer (truncating if necessary) **`f`** — Floating-point number **`s`** — String **`x`** — Integer (truncating if necessary) and formatted in unsigned hexadecimal notation

Parameters

`cFormat`	The format string to use.
`arguments`	The optional arguments(s) that contain the data to be inserted in place of the `%` tags specified in the first parameter, the format string. The number of optional arguments must be the same as the number of `%` tags.

Note: The `util.printf` function does not accept an object literal with properties that contain the arguments. Arguments are entered in the usual comma-delimited list.

Returns

A result string formatted as specified.

Example

Take an irrational number and display it using various formats of `util.printf`.

```
var n = Math.PI * 100;
console.clear();
console.show();
console.println(util.printf("Decimal format: %d", n));
console.println(util.printf("Hex format: %x", n));
console.println(util.printf("Float format: %.2f", n));
console.println(util.printf("String format: %s", n));
```

The output of the above script is as follows:

```
Decimal format: 314
Hex format: 13A
Float format: 314.16
String format: 314.159265358979
```

printx

3.01			

Formats a source string, `cSource`, according to a formatting string, `cFormat`. A valid format for `cFormat` is any string that may contain special masking characters:

Value	Effect
?	Copy next character.
X	Copy next alphanumeric character, skipping any others.
A	Copy next alpha character, skipping any others.
9	Copy next numeric character, skipping any others.
*	Copy the rest of the source string from this point on.
\	Escape character.
>	Upper case translation until further notice.
<	Lower case translation until further notice.
=	Preserve case until further notice (default).

Parameters

`cFormat`	The formatting string to use.
`cSource`	The source string to use.

Returns

The formatted string.

Example

Format a string as a U.S. telephone number.

```
var v = "aaa14159697489zzz";
v = util.printx("9 (999) 999-9999", v);
console.println(v);
```

scand

4.0			

Converts a date into a JavaScript Date object according to the rules of a format string. This routine is much more flexible than using the date constructor directly.

Note: Given a two-digit year for input, `scand` uses the *date horizon* heuristic to resolve the ambiguity. If the year is less than 50, it is assumed to be in the 21st century (that is, add 2000). If it is greater than or equal to 50, it is in the 20th century (add 1900).

The supplied date `cDate` should be in the same format as described by `cFormat`.

Parameters

`cFormat`	The rules to use for formatting the date. `cFormat` uses the same syntax as found in `printd`.
`cDate`	The date to convert.

Returns

The converted Date object, or `null` if the conversion fails.

Example 1

```
/* Turn the current date into a string. */
var cDate = util.printd("mm/dd/yyyy", new Date());
console.println("Today's date: " + cDate);
/* Parse it back into a date. */
var d = util.scand("mm/dd/yyyy", cDate);
/* Output it in reverse order. */
console.println("Yet again: " + util.printd("yyyy mmm dd", d));
```

Example 2

Retrieve a text field value, see if it is a date of the acceptable format, then report results in an alert box or the console window.

The method returns `null` if the conversions fails, which can occur if the user inputs a data different than what is expected. In this case, test the return value for `null`.

```
var d= util.scand("mm/dd/yyyy", this.getField("myDate").value);
   if ( d== null )
      app.alert("Please enter a valid date of the form" +
        " \"mm/dd/yyyy\".")
   else {
      console.println("You entered the date: "
        + util.printd("mmmm dd, yyyy",d));
}
```

spansToXML

6.0			

Converts an array of `Span` objects into an XML(XFA) String as described in the *PDF Reference* version 1.7.

Parameters

An array of `Span` objects	An array of Span objects to be converted into an XML string.

Returns

String

Example

Get the value of a rich text field, turns all of the text blue, converts it to an XML string and then prints it to the console.

```
var f = getField("Text1");
var spans = f.richValue;
for(var index = 0; index < spans.length; index++)
   spans[index].textColor = color.blue;
console.println(util.spansToXML(spans));
```

streamFromString

7.0			

Converts a string to a `ReadStream` object.

Parameters

cString	The string to be converted into a ReadStream object.
cCharSet	(optional) The encoding for the string in cString. The options are utf-8, utf-16, Shift-JIS, BigFive, GBK, UHC. The default is utf-8.

Returns

ReadStream object

Example

Take the response given in a text field of this document and append it to an attached document.

```
var v = this.getField("myTextField").value;
var oFile = this.getDataObjectContents("MyNotes.txt");
var cFile = util.stringFromStream(oFile, "utf-8");
cFile += "\r\n" + cFile;
oFile = util.streamFromString( cFile, "utf-8");
this.setDataObjectContents("MyNotes.txt", oFile);
```

This example uses the Doc methods getDataObjectContents and setDataObjectContents and util.stringFromStream.

stringFromStream

7.0			

Converts a ReadStream object to a string.

Parameters

oStream	ReadStream object to be converted into a string.
cCharSet	(optional) The encoding for the string in oStream. The options are utf-8, utf-16, Shift-JIS, BigFive, GBK, UHC. The default is utf-8.

Returns

String

Example

Assume there is a text file embedded in this document. This example reads the contents of the attachment and displays it in the multiline text field.

```
var oFile = this.getDataObjectContents("MyNotes.txt");
var cFile = util.stringFromStream(oFile, "utf-8");
this.getField("myTextField").value = cFile;
```

This example uses getDataObjectContents to get the file stream of the attached document.

xmlToSpans

6.0			

Converts an XML (XFA) string, as described in the *PDF Reference* version 1.7, to an array of Span objects suitable for specifying as the `richValue` or `richContents` of a field or annotation.

Parameters

a string	An XML (XFA) string to be converted to an array of `Span` objects.

Returns

An Array of `Span` objects

Example

Get the rich text string from "Text1", convert it to XML, then convert it back to an array of Span objects and repopulate the text field.

```
var f = getField("Text1");
var spans = f.richValue;
var str = util.spansToXML(spans);
var spans = util.xmlToSpans(str);
f.richValue = spans;
```

XFA

6.0.2			

The XFA object provides access to the XFA `appModel` container. More detailed information is available in *Developing Acrobat Applications Using JavaScript* (see "Related documentation" on page 28). Additional XFA documentation is available through the XML section of the Acrobat Family Developer Center.

An XFA object is returned by the `XMLData.parse` and `XMLData.applyXPath` methods.

Example

The following code detects whether the PDF document has Acrobat forms or was created by LiveCycle Designer and has XML forms. The script can be run in the console, or as a batch sequence; in the latter case, the script can be used to classify all selected document as an XML form (dynamic or static) or as an Acrobat form.

```
// This script assumes you are using Acrobat 8.0.
console.println("Document name: " + this.documentFileName);
// The xfa object is undefined in an Acrobat form.
if ( typeof xfa == "object" ) {
   if ( this.dynamicXFAForm )
      console.println("  This is a dynamic XML form.");
   else
      console.println("  This is a static XML form.");
   if ( this.XFAForeground )
      console.println("  This document has imported artwork");
}
else console.println("  This is an Acrobat form.");
```

XMLData

`XMLData` is a static object that allows the creation of a JavaScript object representing an XML document tree and permits the manipulation of arbitrary XML documents through the XFA Data DOM. (In XFA, there are several other DOMs parallel to the Data DOM, but for the purpose of the `XMLData` object, only the Data DOM is used.)

PDF documents that return `true` to the Doc `dynamicXFAForm` property can use the `XMLData` object but cannot have its form fields manipulated by that object, because the two data DOMs are isolated from each other.

XMLData methods

applyXPath

7.0			

Enables you to manipulate and query an XML document by using XPath expressions. The XPath language is described in the W3C document *XML Path Language (XPath)*, which is available at http://www.w3.org/TR/xpath.

XPath expressions evaluate to one of the known four types: Boolean, Number, String, Node-set. In JavaScript, they are returned, respectively, as the following types: Boolean, Number, String, and Object.

If an object is returned, it is of type `XFA` object, which represents either a tree started by a single node or a tree started by a list of nodes (a tree list). The type of this object is the same as the one returned by the `XMLData.parse`.

Note: XFA provides a query mechanism, SOM expressions, which is similar to that of XPath. Because XPath is widely used in the XML community, the `applyXPath` method allows users to use XPath expressions if they choose.

Parameters

`oXml`	An XFAObject object representing an XML document tree. **Note:** An exception is thrown if the value of this parameter is a nodeList XFA object instead of the root of an XML tree.
`cXPath`	A string parameter with the XPATH query to be performed on the document tree.

Returns

Boolean, Number, String, or XFAObject.

Example

This example shows each of the return types of `XMLData.applyXPath` (Boolean, number, string, or XFAObject). It extracts information from an XML data string, in this case, the family tree of the "Robat" family).

```
var cXMLDoc = "<family name = 'Robat'>\
   <grandad id = 'm1' name = 'A.C.' gender='M'>\
      <child> m2 </child>\
      <personal>\
         <income>100000</income>\
      </personal>\
   </grandad>\
   <dad id = 'm2' name = 'Bob' gender='M'>\
      <parent> m1 </parent>\
      <spouse> m3 </spouse>\
      <child> m4 </child>\
      <child> m5 </child>\
      <child> m6 </child>\
      <personal>\
         <income>75000</income>\
      </personal>\
   </dad>\
   <mom id = 'm3' name = 'Mary' gender='F'>\
      <spouse> m2 </spouse>\
      <personal>\
         <income>25000</income>\
      </personal>\
   </mom>\
   <daughter id = 'm4' name = 'Sue' gender='F'>\
      <parent> m2 </parent>\
      <personal>\
         <income>40000</income>\
      </personal>\
   </daughter>\
   <son id = 'm5' name = 'Jim' gender='M'>\
      <parent> m2 </parent>\
      <personal>\
         <income>35000</income>\
      </personal>\
   </son>\
   <daughter id = 'm6' name = 'Megan' gender='F'>\
      <parent> m2 </parent>\
      <personal>\
         <income>30000</income>\
      </personal>\
   </daughter>\
</family>";
var myXML= XMLData.parse( cXMLDoc, false);
```

The following line returns an XFAObject.

Get mom's data.

```
var a = XMLData.applyXPath(myXML, "//family/mom")
a.saveXML('pretty');
<?xml version="1.0" encoding="UTF-8"?>
<mom id="m3" name="Mary" gender="F">
   <spouse> m2 </spouse>
   <personal>
      <income>25000</income>
   </personal>
</mom>
// get the income element value
a.personal.income.value = "20000"; // change the income
```

Get dad's name, an attribute.

```
var b = XMLData.applyXPath(myXML, "//family/dad/@name");
b.saveXML('pretty');
<?xml version="1.0" encoding="UTF-8"?>
name="Bob"
// assign to a variable
var dadsName = b.value; // dadsName = "Bob"
```

Get all attributes of dad node.

```
var b = XMLData.applyXPath( myXML, "//family/dad/attribute::*" );
for(var i=0; i < b.length; i++)
   console.println(b.item(i).saveXML('pretty'))
```

The loop above outputs the following to the console.

```
<?xml version="1.0" encoding="UTF-8"?>
id="m2"
<?xml version="1.0" encoding="UTF-8"?>
name="Bob"
<?xml version="1.0" encoding="UTF-8"?>
gender="M"
```

Extract particular information from this

```
console.println("For attribute 2, we have " + b.item(2).name + " = '"
   + b.item(2).value + "'.");
```

which yields an output of

```
For attribute 2, we have gender = 'M'.
```

Get dad's second child.

```
var c = XMLData.applyXPath(myXML, "//family/dad/child[position()=2]");
c.saveXML('pretty')
<?xml version="1.0" encoding="UTF-8"?>
<child> m5 </child>
```

This is the `id` of dad's second child. The examples below get the family data on this child.

The following returns a string.

```
// Calculate the value of dadsName using XPath methods.
var dadsName = XMLData.applyXPath(myXML, "string(//family/dad/@name)")
// dadsName is assigned a value of "Bob" with this one line.
```

Get the family information on dad's second child. The following line assigns `c = "m5"`. The return value of the call to `applyXPath` is a string, and the function `normalize-space` converts its argument to a string and removes any surrounding spaces.

```
var c = XMLData.applyXPath(myXML,
   "normalize-space(//family/dad/child[2])");
var d = "//*[@id = \'" + c + "\']"; // Note: d= "//*[@id = 'm5']"
XMLData.applyXPath(myXML, d ).saveXML('pretty'); // show what we have
<son id="m5" name="Jim" gender="M">
   <parent> m2 </parent>
   <personal>
      <income>35000</income>
   </personal>
</son>
```

Now display information about the sixth child node of the family root. The XPath functions `name` and `concat` are used.

```
var e = XMLData.applyXPath(myXML,
   "concat(name(//family/child::*[position()=6]), '=',
   //family/child::*[position()=6]/@name)" );
console.println(e); // the output is "daughter=Megan"
```

Get the names of all members of the "Robat" family.

```
e = XMLData.applyXPath(myXML,"//family/child::*" );
for ( var i = 1; i <= e.length; i++ )  {
   var str = "string(//family/child::*["+i+"]/@name)";
   console.println(XMLData.applyXPath(myXML,str));
}
```

The output is

```
A.C.
Bob
Mary
Sue
Jim
Megan
```

The following code shows a Boolean return value.

```
var f = XMLData.applyXPath( myXML, "//family/dad/@id = 'm2'" );
if ( f == true ) console.println("dad's id is 'm2'");
else console.println("dad's id is not 'm2'");
```

The following code shows a numeric return value.

```
// Get dad's income
g = XMLData.applyXPath( myXML, "number(//family/dad/personal/income)" );
// Double dad's salary, implied conversion to a number type
console.println("Dad's double salary is " +
   XMLData.applyXPath( myXML, "//family/dad/personal/income * 2" ) );
```

Now compute the total income of the family "Robat".

```
console.println("Total income of A.C. Robat's family is "
   + XMLData.applyXPath( myXML, "sum(//income)" ) + ".");
```

The above line writes the following to the console.

```
Total income of A.C. Robat's family is 305000.
```

List the individual incomes.

```
var g = XMLData.applyXPath( myXML, "//income")
for ( var i =0; i< g.length; i++) console.println(g.item(i).value);
```

parse

7.0			

Creates an object representing an XML document tree. Its parameters are the same as those of the `loadXML` method in the XFA Data DOM.

This method returns an object of type `XFA` object that represents either a tree headed by a single node or a tree started by a list of nodes (a tree list).

Parameters

`param1`	A string containing the XML document.
`param2`	(optional) A Boolean value specifying whether the root node of the XML document should be ignored. The default value is `true`. If `false`, the root node should not be ignored.

Returns

XFAObject

Example 1

Consider the XML document as first introduced in the example following the `XMLData.applyXPath` method.

```
var x = XMLData.parse( cXMLDoc, false );
var y = x.family.name;          // An XFAObject
console.println(y.value);       // Output to console is "Robat"
```

Get information about dad.

```
y = x.family.dad.id;            // An XFAObject
console.println(y.value);       // Output to console is "m2"

y = x.family.dad.name.value;              // y = "Bob"
x.family.dad.name.value = "Robert";       // Change name to "Robert"
y = x.family.dad.name.value;              // y = "Robert"

y = x.family.dad.personal.income.value;          // y = "75000"
x.family.dad.personal.income.value = "80000";    // Give dad a raise
```

Example 2

Create a simple XML document and manipulate it.

```
x = XMLData.parse("<a> <c>A.</c><d>C.</d> </a>", false);
x.saveXML("pretty");
```

The output of the previous line is

```
<?xml version="1.0" encoding="UTF-8"?>
<xfa:data xmlns:xfa="http://www.xfa.org/schema/xfa-data/1.0/">
   <a>
      <c>A.</c>
      <d>C.</d>
   </a>
</xfa:data>
```

Now create another simple document.

```
y = XMLData.parse("<b>Robat</b>", false);
y.saveXML("pretty");
```

The output of this line

```
<?xml version="1.0" encoding="UTF-8"?>
<xfa:data xmlns:xfa="http://www.xfa.org/schema/xfa-data/1.0/">
   <b>Robat</b>
</xfa:data>
```

Append `y` on to `x`.

```
x.nodes.append(y.clone(true).nodes.item(0));
x.saveXML("pretty");
```

The result:

```
<?xml version="1.0" encoding="UTF-8"?>
<xfa:data xmlns:xfa="http://www.xfa.org/schema/xfa-data/1.0/">
   <a>
      <c>A.</c>
      <d>C.</d>
   </a>
   <b>Robat</b>
</xfa:data>
```

Now execute

```
x.nodes.insert(y.clone(true).nodes.item(0), x.nodes.item(0));
x.saveXML("pretty")
```

to obtain

```
<?xml version="1.0" encoding="UTF-8"?>
<xfa:data xmlns:xfa="http://www.xfa.org/schema/xfa-data/1.0/">
   <b>Robat</b>
   <a>
      <c>A.</c>
      <d>C.</d>
   </a>
   <b>Robat</b>
</xfa:data>
```

Now remove these two nodes.

```
x.nodes.remove( x.nodes.namedItem("b") );
x.nodes.remove( x.nodes.namedItem("b") );
```

Now, we are back to the original XML document.

```
<?xml version="1.0" encoding="UTF-8"?>
<xfa:data xmlns:xfa="http://www.xfa.org/schema/xfa-data/1.0/">
   <a>
      <c>A.</c>
      <d>C.</d>
   </a>
</xfa:data>
```

Executing the following line

```
x.a.nodes.insert( y.clone(true).nodes.item(0), x.a.nodes.item(0));
x.saveXML("pretty");
```

yields the following output:

```
<?xml version="1.0" encoding="UTF-8"?>
<xfa:data xmlns:xfa="http://www.xfa.org/schema/xfa-data/1.0/">
   <a>
      <b>Robat</b>
      <c>A.</c>
      <d>C.</d>
   </a>
</xfa:data>
```

Now remove that node just inserted.

```
x.a.nodes.remove( x.a.nodes.namedItem("b"));
```

Now insert `y` (actually a clone of `y`) between the first and second children of the element `a`.

```
x.a.nodes.insert( y.clone(true).nodes.item(0), x.a.nodes.item(1));
```

This produces the following

```
<?xml version="1.0" encoding="UTF-8"?>
<xfa:data xmlns:xfa="http://www.xfa.org/schema/xfa-data/1.0/">
<a>
   <c>A.</c>
   <b>Robat</b>
   <d>C.</d>
</a>
</xfa:data>
```

Remove that node just inserted:

```
x.a.nodes.remove( x.a.nodes.namedItem("b"));
```

Finally, append `y` onto `a`.

```
x.a.nodes.append( y.clone(true).nodes.item(0));
```

yielding

```
<?xml version="1.0" encoding="UTF-8"?>
<xfa:data xmlns:xfa="http://www.xfa.org/schema/xfa-data/1.0/">
   <a>
      <c>A.</c>
      <d>C.</d>
      <b>Robat</b>
   </a>
</xfa:data>
```

3 New Features and Changes

This section summarizes the new features and changes introduced in Acrobat 8.1 and earlier.

Acrobat 8.1 changes

There are new security restrictions for the `search` object's `addIndex`, `query`, and `removeIndex` methods, as well as the `spell` object's `removeWord` method. For more information, see those method descriptions.

Acrobat 8.0 changes

The JavaScript interpreter now supports E4X, ECMA-357. "EMCAScript for XML (E4X) Specification", http://www.ecma-international.org/publications/standards/Ecma-357.htm, documents this specification. An example following `metadata` on page 247 illustrates E4X usage.

The JavaScript category in the Preferences dialog box (Ctrl + K) has a new security check box, "Enable global object security policy".

- When checked, the default, each time a global variable is written to, the origin which set it is remembered. Only origins that match can then access the variable. For files, this means only the file that set it, having the same path it had when the variable was set, can access the variable. For documents from URLs, it means only the web host which set it can access the variable.

  There is an important exception to the restrictions described above. Global variables can be defined and accessed in a privileged context, in the console, in a batch sequence and in folder JavaScript. For more information on privileged contexts, see "Privileged versus non-privileged context" on page 32.

- When not checked, documents from different origins are permitted to access the variable; this is the behavior previous to version 8.0.

See the section on the `global` object, page 482, for additional details and examples.

There is a new restriction on the use of `app.execMenuItem` to a list of safe menu items. See the security note on page 120.

The following properties and methods are introduced in Acrobat 8.0:

Certificate object	properties:
	`privateKeyValidityEnd`
	`privateKeyValidityStart`
	`validityEnd` (First introduced in version 7.0.5, but undocumented.)
	`validityStart` (First introduced in version 7.0.5, but undocumented.)

CertificateSpecifier Object	properties :
	`subjectDN`
	`keyUsage`
	`urlType`
	Expanded description of the `url` property.
	Added four new bit flags to the `flags` property: `subjectDN`, `issuerDN`, `keyUsage`, `url`.

colorConvertAction object	properties:
	`action`
	`alias`
	`colorantName`
	`convertIntent`
	`convertProfile`
	`embed`
	`isProcessColor`
	`matchAttributesAll`
	`matchAttributesAny`
	`matchIntent`
	`matchSpaceTypeAll`
	`matchSpaceTypeAny`
	`preserveBlack`
	`useBlackPointCompensation`

Doc object	properties:
	`xfa` (First introduced in version 6.0.2, but undocumented.)
	`XFAForeground`
	methods:
	`colorConvertPage`
	`embedOutputIntent`
	`exportAsFDFStr`
	`exportAsXFDFStr`
	`getColorConvertAction`

`Net` object	properties:
	`SOAP`
	(`Net.SOAP` has properties and methods aliased with `SOAP.wireDump`, `SOAP.connect`, `SOAP.request`, `SOAP.response`.)
	`Discovery`
	(`Net.Discovery` has methods aliased with `SOAP.queryServices` and `SOAP.resolveService`.)
	`HTTP`
	methods: see page 547
	`steamDecode`
	`streamDigest`
	`streamEncode`

Net.HTTP object	methods: request
PrintParams	properties: booklet constants.bookletBindings constants.bookletDuplexMode constants.handling.booklet (See pageHandling for a description.)
RDN object	properties: Added 22 properties to the RDN object: businessCategory, countryOfCitizenship, countryOfResidence, dateOfBirth, dc, dnQualifier, gender, generationQualifier, givenName, initials, l, name, nameAtBirth, placeOfBirth, postalAddress, postalCode, pseudonym, serialNumber, sn, st, street, title
SecurityHandler object	properties: The following three properties were previously undocumented. docDecrypt docEncrypt validateFDF
SeedValue Object	Added three new flags: legalAttestations, shouldAddRevInfo, digestMethod. Change of behavior of the reasons property. Added the digestMethod property. Change in wording of the description of the version property. Added the shouldAddRevInfo property.
SignatureInfo object	properties: digestMethod

The following properties and methods are modified in Acrobat 8.0:

app object	methods: openDoc (cDest parameter added)
Doc object	methods: addAnnot (New default values for the author property.) addRecipientListCryptFilter (Added note for Acrobat 7.0.) getLegalWarnings (No longer dirties document. Return value changed.) importTextData (Can be only executed during a console or batch event.)
FDF object	methods: addEmbeddedFile (Updated description of the nSaveOption parameter for version 8.)
Field object	methods: buttonImportIcon (Can be executed only during a console or batch event)

FullScreen object	properties: `escapeExits` (Can be set to `false` only during console and batch events)
LoginParameters Object	Modified wording of the `cURI` and `cUserId` properties.
submitForm method	The `cPassword` parameter can no longer be used. As of Acrobat 8.0, you cannot create password-encrypted FDF files. If this parameter is used, a form trying to submit a password-encrypted FDF will throw an `ESErrorInvalidArgs` exception and the form submission will not occur.

Acrobat 7.0.5 changes

Columns 5 and 6 of the quick bars have been removed.

The following properties and methods were introduced in Acrobat 7.0.5:

`Collab` object	methods: `documentToStream`
`Data` object	properties: `description`

`Doc` object	properties:
	`hostContainer`
	`isModal`
	`viewState`
	methods:
	`addRequirement`
	`removeRequirement`

`Embedded PDF` object	properties:
	`messageHandler`
	method:
	`postMessage`

`HostContainer` object	properties:
	`messageHandler`
	methods:
	`postMessage`

`util` object	methods: `crackURL`

The following properties and methods were modified in Acrobat 7.0.5:

`SOAP` object	methods: `request` (`cRequestStyle` and `cContent` parameters added) `response` (`cRequestStyle` and `cContent` parameters added)

Acrobat 7.0 changes

The *Acrobat Multimedia JavaScript Reference*, which appeared as a separate document in version 6.0.2, was merged into the *Acrobat JavaScript Scripting Reference*, now named *JavaScript for Acrobat API Reference*. See the section "Introduced in Acrobat 6.0.2" on page 755 for a listing of all multimedia JavaScript objects, properties and methods.

Execution of JavaScript through a menu event is no longer privileged. There is now support for executing privileged code in a non-privileged context. See "Privileged versus non-privileged context" on page 32 for details.

In versions of Acrobat earlier than 7.0, the JavaScript files `AForm.js`, `ADBC.js`, `Annots.js`, `AnWizard.js`, `media.js`, and `SOAP.js` resided in the App JavaScript folder. Beginning with Acrobat 7.0, these files are not shipped with Acrobat Professional, Acrobat Standard or Adobe Reader. In their place, a precompiled bytecode is used to improve performance. The `debugger.js` file in the App folder is not included in the bytecode.

Files in the User JavaScript folder are not included in the precompiled bytecode file.

It is recommended that users put their own `.js` files in the user JavaScript folder, the same place where `glob.js` resides. JavaScript code that sets up menu items (`addMenuItem`) should be put in `config.js` in the User JavaScript folder. The location of this folder can be found programmatically by executing `app.getPath("user","javascript")` from the console.

Adobe Reader now has a console window. Under Edit > Preferences > JavaScript select Show Console on Errors and Messages. In addition to errors and exceptions, the console can also be opened programmatically with `console.show()`. See the `console` object for a few other details.

The debugging capability of the JavaScript Debugging window can be made available for Adobe Reader for the Windows and Mac OS platforms. To debug within Adobe Reader, the JavaScript file `debugger.js` must be installed, and the Windows registry must be edited appropriately. See *Developing Acrobat Applications Using JavaScript* for the technical details.

Introduced in Acrobat 7.0

The following properties and methods were introduced in Acrobat 7.0.

Alerter object	methods: dispatch
Annotation object	properties: callout caretSymbol[a] creationDate[a] dash[b] delay[b] doCaption intent leaderExtend leaderLength lineEnding opacity[b] refType richDefaults[a] seqNum[b] state[a] stateModel[a] style subject[a]
Annot3D object	properties: activated context3D innerRect name page rect
app object	properties: constants methods: beginPriv browseForDoc endPriv execDialog launchURL trustedFunction trustPropagatorFunction

Dialog object	methods: enable end load store
Doc object	properties: docID[a] dynamicXFAForm external hidden mouseX mouseY noautocomplete nocache requiresFullSave methods: addWatermarkFromFile addWatermarkFromText embedDocAsDataObject encryptUsingPolicy getAnnot3D getAnnots3D getDataObjectContents getOCGOrder openDataObject removeScript setDataObjectContents setOCGOrder
Doc.media object	methods: getOpenPlayers
Field object	methods: signatureGetModifications
OCG object	properties: constants initState locked methods: getIntent setIntent
PlayerInfo object	methods: honors

PrintParams object	properties: nUpAutoRotate nUpNumPagesH nUpNumPagesV nUpPageBorder nUpPageOrder
search object	properties: attachments ignoreAccents objectMetadata proximityRange
security object	security constants methods: chooseSecurityPolicy getSecurityPolicies
SecurityPolicy object	SecurityPolicy properties
SOAP object	methods: queryServices resolveService streamDigest
util object	methods: iconStreamFromIcon streamFromString stringFromStream
XMLData object	methods: applyXPath parse

a. Present in version 6.0, documented in version 7.0.

b. Present in version 5.0, documented in version 7.0.

Modified in Acrobat 7.0

Changed or enhanced objects, methods, and properties

The following properties and methods were changed or enhanced:

app object	methods: addToolButton execMenuItem getPath mailGetAddrs openDoc

console object	The console window is now available in Adobe Reader.
Doc object	methods: createTemplate mailDoc print saveAs submitForm
Field object	methods: signatureSetSeedValue
Index object	methods: build
OCG object	properties: name
PrintParams object	properties: pageHandling
search object	properties: indexes
security object	properties: handlers methods: getHandler
SecurityHandler object	properties: digitalIDs methods: login newUser
SOAP object	methods: connect request
spell object	The Spell object is not available in Adobe Reader 7.0 or later. methods: addWord
util object	methods: printd

Acrobat 6.0 changes

The notion of a safe path was introduced for this version of Acrobat. See "Safe path" on page 31 for details.

Introduced in Acrobat 6.0

The following properties and methods were introduced in Acrobat 6:

ADBC object	SQL types
AlternatePresentation object	properties: active type methods: start stop
Annotation object	properties: borderEffectIntensity borderEffectStyle inReplyTo richContents toggleNoView methods: getStateInModel transitionToState
app object	properties: fromPDFConverters printColorProfiles printerNames runtimeHighlight runtimeHighlightColor thermometer viewerType methods: addToolButton getPath mailGetAddrs newFDF openFDF popUpMenuEx removeToolButton

Bookmark object	methods: setAction
catalog object	properties: isIdle jobs methods: getIndex remove
Certificate object	properties: keyUsage usage
Collab object	methods: addStateModel removeStateModel
Connection object	methods: close
dbg object	properties: bps methods: c cb q sb si sn so sv
Directory object	properties: info methods: connect

DirConnection object	properties: canList canDoCustomSearch canDoCustomUISearch canDoStandardSearch groups name uiName methods: search setOutputFields
Doc object	properties: alternatePresentations documentFileName metadata permStatusReady methods: addLink addRecipientListCryptFilter addRequirement encryptForRecipients exportAsText exportXFAData getLegalWarnings getLinks getOCGs getPrintParams importXFAData newPage removeLinks setAction setPageAction setPageTabOrder
Error object	properties: fileName lineNumber message name methods: toString

event object	properties: fieldFull richChange richChangeEx richValue
FDF object	properties: deleteOption isSigned numEmbeddedFiles methods: addContact addEmbeddedFile addRequest close mail save signatureClear signatureSign signatureValidate
Field object	properties: buttonFitBounds comb commitOnSelChange defaultStyle radiosInUnison richText richValue rotation methods: getLock setLock signatureGetSeedValue signatureSetSeedValue
Index object	methods: build

Link object	properties: borderColor borderWidth highlightMode rect methods: setAction
OCG object	properties: name state methods: setAction
PrintParams object	properties: binaryOK bitmapDPI colorOverride colorProfile constants downloadFarEastFonts fileName firstPage flags fontPolicy gradientDPI interactive lastPage pageHandling pageSubset printAsImage printContent printerName psLevel rasterFlags reversePages tileLabel tileMark tileOverlap tileScale transparencyLevel usePrinterCRD useT1Conversion

Report object	properties: style
search object	properties: docInfo docText docXMP bookmarks ignoreAsianCharacterWidth jpegExif legacySearch markup matchWholeWord wordMatching
security object	methods: chooseRecipientsDialog getSecurityPolicies importFromFile
SecurityHandler object	properties: digitalIDs directories directoryHandlers signAuthor signFDF methods: newDirectory
SOAP object	properties: wireDump methods: connect request response streamDecode streamEncode streamFromString stringFromStream

Span object	properties: alignment fontFamily fontStretch fontStyle fontWeight text textColor textSize strikethrough subscript superscript underline
spell object	properties: languages languageOrder methods: customDictionaryClose customDictionaryCreate customDictionaryExport customDictionaryOpen ignoreAll
Thermometer object	properties: cancelled duration value text methods: begin end
util object	methods: printd spansToXML xmlToSpans

Modified in Acrobat 6.0

Changed or enhanced objects, methods, and properties

The following properties and methods were changed or enhanced:

app object	methods: addMenuItem alert listMenuItems listToolbarButtons response
Doc object	properties: layout zoomType methods: createDataObject exportAsFDF exportAsXFDF exportDataObject flattenPages getField (see Extended Methods) getURL importDataObject importIcon print saveAs spawnPageFromTemplate submitForm
event object	properties: changeEx
Field object	properties: name methods: buttonImportIcon signatureInfo signatureSign signatureValidate
global object	Persistent global data only applies to variables of type Boolean, Number or String. Acrobat 6.0 has reduced the maximum size of global persistent variables from 32 KB to 2-4 KB. Any data added to the string after this limit is dropped.

search object	methods: query
SecurityHandler object	The following were introduced in Acrobat 5.0 as properties and methods of the PPKLite Signature Handler Object. In Acrobat 6.0, they are properties and methods of the SecurityHandler object. All of these have new descriptions, and some have additional parameters. **Note:** When signing using JavaScript methods, the user's digital signature profile must be a .pfx file, not an .apf, as in earlier versions of Acrobat. To convert an .apf profile to the new .pfx type, use the UI (click Advanced > Manage Digital IDs > My Digital ID Files > Select My Digital ID File) to import the .apf profile. properties: appearances isLoggedIn loginName loginPath name signInvisible signVisible uiName methods: login logout newUser setPasswordTimeout
Templatet object	methods: spawn

Extended Methods

The Document.getField method was extended in Acrobat 6.0 so that it retrieves the Field object of individual widgets. See the Field object for a discussion of widgets and how to work with them.

Deprecated in Acrobat 6.0

search object	properties: soundex thesaurus
spell object	methods: addDictionary removeDictionary

Introduced in Acrobat 6.0.2

The following objects, properties and methods were introduced in Acrobat 6.0.2:

XFA object	

The following table lists the objects, properties and methods of the Multimedia plug-in. In Acrobat 6.0.2, multimedia JavaScript was documented in a separate document called the "Acrobat Multimedia JavaScript Reference".

app object	properties: media monitors
app.media object	properties: align canResize closeReason defaultVisible ifOffScreen layout monitorType openCode over pageEventNames raiseCode raiseSystem renditionType status trace version windowType

app.media object (Continued)	methods: addStockEvents alertFileNotFound alertSelectFailed argsDWIM canPlayOrAlert computeFloatWinRect constrainRectToScreen createPlayer getAltTextData getAltTextSettings getAnnotStockEvents getAnnotTraceEvents getPlayers getPlayerStockEvents getPlayerTraceEvents getRenditionSettings getURLData getURLSettings getWindowBorderSize openPlayer removeStockEvents startPlayer
Doc object	properties: innerAppWindowRect innerDocWindowRect media outerAppWindowRect outerDocWindowRect pageWindowRect
Doc.media object	properties: canPlay methods: deleteRendition getAnnot getAnnots getRendition newPlayer
event object	A new Screen type used with Multimedia along with associated event names.

Events object	methods: add dispatch remove
EventListener object	methods: afterBlur afterClose afterDestroy afterDone afterError afterEscape afterEveryEvent afterFocus afterPause afterPlay afterReady afterScript afterSeek afterStatus afterStop onBlur onClose onDestroy onDone onError onEscape onEveryEvent onFocus onGetRect onPause onPlay onReady onScript onSeek onStatus onStop
Marker object	properties: frame index name time

Markers object	properties: player methods: get
MediaOffset object	properties: frame marker time
MediaPlayer object	properties: annot defaultSize doc events hasFocus id innerRect isOpen isPlaying markers outerRect page settings uiSize visible methods: close open pause play seek setFocus stop triggerGetRect where
MediaReject object	properties: rendition
MediaSelection object	properties: selectContext players rejects rendition

MediaSettings object	properties: autoPlay baseURL bgColor bgOpacity endAt floating duration floating layout monitor monitorType page palindrome players rate repeat showUI startAt visible volume windowType
Monitor object	properties: colorDepth isPrimary rect workRect
Monitors object	methods: bestColor bestFit desktop document filter largest leastOverlap mostOverlap nonDocument primary secondary select tallest widest

PlayerInfo object	properties: id mimeTypes name version methods: canPlay canUseData
PlayerInfoList object	methods: select
Rendition object	properties: altText doc fileName type uiName methods: getPlaySettings select testCriteria
ScreenAnnot object	properties: altText alwaysShowFocus display doc events extFocusRect innerDeviceRect noTrigger outerDeviceRect page player rect methods: hasFocus setFocus

Acrobat 5.0 changes

Introduced in Acrobat 5.0

ADBC object	methods: getDataSourceList newConnection
Annotation object	properties: alignment AP arrowBegin arrowEnd author contents doc fillColor hidden modDate name noView page point points popupRect print rect readOnly rotate strokeColor textFont type soundIcon width methods: destroy getProps setProps

app object	properties: activeDocs fs plugIns viewerVariation methods: addMenuItem addSubMenu clearInterval clearTimeOut listMenuItems listToolbarButtons newDoc openDoc popUpMenu setInterval setTimeOut
Bookmark object	properties: children color doc name open parent style methods: createChild execute insertChild remove
color object	methods: convert equal
Connection object	methods: getColumnList getTableList console

Data object	properties: creationDate modDate MIMEType name path size
Doc object	properties: bookmarkRoot disclosed (5.0.5) icons info layout securityHandler selectedAnnots sounds templates URL methods: addAnnot addField addIcon addThumbnails addWeblinks bringToFront closeDoc createDataObject createTemplate deletePages deleteSound exportAsXFDF exportDataObject extractPages flattenPages getAnnot getAnnots getDataObject getIcon getPageBox getPageLabel getPageNthWord getPageNthWordQuads getPageRotation getPageTransition

Doc object (Continued)	getSound importAnXFDF importDataObject importIcon importSound importTextData insertPages movePage print removeDataObject removeField removeIcon removeTemplate removeThumbnails removeWeblinks replacePages saveAs selectPageNthWord setPageBoxes setPageLabels setPageRotations setPageTransitions submitForm syncAnnotScan
event object	properties: changeEx keyDown targetName
Field object	properties: buttonAlignX buttonAlignY buttonPosition buttonScaleHow buttonScaleWhen currentValueIndices doNotScroll doNotSpellCheck exportValues fileSelect multipleSelection rect strokeColor submitName valueAsString

Field object (Continued)	methods: browseForFileToSubmit buttonGetCaption buttonGetIcon buttonSetCaption buttonSetIcon checkThisBox defaultIsChecked isBoxChecked isDefaultChecked setAction signatureInfo signatureSign signatureValidate
FullScreen object	properties: backgroundColor clickAdvances cursor defaultTransition escapeExits isFullScreen loop timeDelay transitions usePageTiming useTimer
global object	methods: subscribe
identity object	properties: corporation email loginName name
Index object	properties: available name path selected

PlayerInfo object	properties: certified loaded name path version
PPKLite Signature Handler Object (now listed under the SecurityHandler object)	properties: appearances isLoggedIn loginName loginPath name signInvisible signVisible uiName methods: login logout newUser setPasswordTimeout
Report object	properties: absIndent color absIndent methods: breakPage divide indent outdent open mail writeText save writeText
search object	properties: available indexes markup maxDocs proximity refine soundex stem

search object (Continued)	methods: addIndex getIndexForPath query removeIndex
security object	properties: handlers validateSignaturesOnOpen methods: getHandler
spell object	properties: available dictionaryNames dictionaryOrder domainNames methods: addDictionary addWord check checkText checkWord removeDictionary removeWord userWords
Statement object	properties: columnCount rowCount methods: execute getColumn getColumnArray getRow nextRow
Template object	properties: hidden name methods: spawn

Modified in Acrobat 5.0

The console can act as an editor and can execute JavaScript code.

The following properties and methods have been changed or enhanced:

app object	language
	execMenuItem
Doc object	exportAsFDF
	print
	submitForm
event object	type
Field object	textFont
	value
	buttonImportIcon
	getItemAt
util object	printd

The section related to event object has been greatly enhanced to facilitate better understanding of the Acrobat JavaScript Event model.

Deprecated in Acrobat 5.0

The following properties and methods have been deprecated:

app object	fullscreen
	numPlugIns
	getNthPlugInName
Doc object	author
	creationDate
	creationDate
	keywords
	modDate
	numTemplates
	producer
	title
	getNthTemplate
	spawnPageFromTemplate
Field object	hidden
TTS object	soundCues
	speechCues

Modified in Acrobat 5.05

- A new symbol was added to the quick bar denoting which methods are missing from Acrobat Approval.
- In the Doc object, the property disclosed was added.

Modified in Adobe Reader 5.1

Access to the following properties and methods was changed for the Adobe 5.1 Reader:

Annotation object	properties:		
	alignment	modDate	rect
	AP	name	readOnly
	arrowBegin	noView	rotate
	arrowEnd	page	strokeColor
	author	point	textFont
	contents	points	type
	doc	popupRect	soundIcon
	fillColor	print	width
	hidden		
	methods:		
	destroy		
	getProps		
	setProps		
Doc object	properties:		
	selectedAnnots		
	methods:		
	addAnnot	importAnXFDF	
	addField	importDataObject	
	exportAsFDF	mailDoc	
	exportAsXFDF	mailForm	
	getAnnot	spawnPageFromTemplate	
	getAnnots	submitForm	
	getNthTemplate	syncAnnotScan	
	importAnFDF		
Template object	methods:		
	spawn		