

ADOBE® ACROBAT® 8 AND ACCESSIBILITY

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Q: Does Adobe Acrobat 8 software adhere to the provisions of the U.S. government's Section 508 guidelines?

A: Adobe creates enhancements for Acrobat with Section 508 in mind. And to help government organizations determine their own compliance, Adobe has prepared a document that details the accessibility features of Acrobat 8, including Adobe Reader® 8 software, in the context of the Section 508 guidelines. Find this document, known as the voluntary accessibility template (VPAT), at www.adobe.com/enterprise/accessibility/section508.html.

Q: How do the Acrobat 8 enhancements improve accessibility for people with disabilities?

A: Acrobat 8 addresses the needs of users with disabilities and authors of accessible content. The new features and enhancements coupled with prior capabilities enable people with disabilities to access, read, and use Adobe PDF documents and forms—across multiple languages—more easily. The improved tools in the Acrobat 8 family for generating, reviewing, and enhancing Adobe PDF files simplify the creation and distribution of electronic content that is optimized for accessibility. See the table at the end of this document for a summary of the key accessibility capabilities available within the Acrobat 8 family.

Q: What are some of the new accessibility features available in Acrobat 8?

A: More reliable results

The speed and accuracy of the automatic tagging feature have been significantly improved in Acrobat 8 and Reader 8. Now, users are provided with better detail on regions, figures, and tables, which means that Acrobat 8 and Reader 8 can more accurately interpret complex documents as well as provide consistent results for simpler documents. Also, new internal compression technologies allow complex documents to be processed faster without slowing down simple documents.

Greater support for producing accessible interactive PDF forms

Two new features have been added to the Accessibility menu—Run Form Field Detection and Add Form Fields to Tags. These features make it easier than ever for authors to create accessible interactive PDF forms.

- **Run Form Field Detection**—Reduces the time it takes to produce interactive forms using the Acrobat forms tools. It automatically adds the appropriate accessibility attributes to interactive form components, such as text fields and checkboxes. Run Form Field Detection creates live form fields from a flat PDF form by analyzing the text and lines in a PDF form to detect where active fields should be placed. This reduces the need for authors to draw these elements on the

page with the Acrobat forms tools. If some fields already exist, they will not be duplicated. If the PDF form is a tagged PDF file, both the existing and the newly created form fields will be placed into the structure tree. When detecting the fields, Run Form Field Detection adds field labels as tool tips and generates them in the document's language with a unique name for each field. Deriving the short descriptions from the field labels reduces the time it takes to prepare accessible PDF forms for distribution.

- **Add Form Fields to Tags**—Adds all form fields to the structure tree when the document is already tagged but the form fields are not. This streamlines the workflow for producing accessible forms and reduces the likelihood that authors will create inaccessible form objects that lie outside the structure tree.

Improved production of accessible tables

New features have been added to make tables more accessible in PDF files. Acrobat 8 provides authors with the ability to create table summaries for tables. The Table Inspector allows authors to examine tables and designate borders, header cells, and data cells. A table cell properties dialog box provides an interface for specifying the scope of header cells as either row, column, both, or none. It also makes it easy for authors to specify table cell attributes for row span, column span, and associated header IDs.

Improved Read Out Loud feature

Read Out Loud, the built-in text-to-speech feature in Acrobat and Reader, has been improved. When used in conjunction with the Select tool, this feature allows sections of the document that are being read out loud to be visually highlighted. Users now have the ability to move forward and backward through the document to read specific paragraphs and skip over items that they do not want read out loud.

Improved support for a variety of accessibility standards

Support for verifying compliance with a broader set of accessibility standards has been added to Acrobat 8. In addition to verifying general PDF accessibility, Acrobat 8 Professional now provides checking and repair against several of the most authoritative accessibility guidelines. Users can now evaluate PDF files for compliance with the web-based information provisions of the U.S. Section 508 guidelines. Acrobat 8 now also evaluates checkpoints for version 1.0 of the W3C Web Content Accessibility Guidelines (WCAG), which are currently in effect, and those proposed for WCAG version 2.0.

Q: Besides the new features, what other features support accessibility in Acrobat 8?

A: Zoom in on text and reflow fits any size view in both tagged and untagged PDF files

People with low vision often have difficulty reading small text. Magnifying the screen view is a cumbersome alternative because users then have to manually pan from left to right to read a single line of text. When users view an Adobe PDF file with the Acrobat 8 reflow feature, text displayed in large type will automatically reflow to fit the available screen space.

Read PDF files and forms out loud uses a standard Microsoft® Windows and Mac OS X text-to-speech engine

Acrobat 8 and Reader 8 synthesize the text in PDF documents and forms into speech using a standard Windows or Macintosh computer, so anyone can read basic PDF text files aloud—and interact with forms—even if a screen reader is not available.

Advanced reading functions for Windows based screen readers

A screen reader with Acrobat 8 or Reader 8 provides the best reading experience for more complicated Adobe PDF files, because products of this type typically offer easier navigation, allow users to toggle between table and text reading modes, provide access to all of the applications on the user's computer, and enable access to both PDF documents and the dialog boxes and controls of the Acrobat application. Acrobat 8 for Windows uses Microsoft Active Accessibility (MSAA), an application programming interface (API) that allows Windows based programs to expose information about their content and user interface to assistive technologies utilizing speech and/or refreshable Braille output devices. Because MSAA is a widely supported accessibility standard, Acrobat 8 for Windows integrates with a broad range of assistive technologies, including screen readers and magnifiers from vendors such as Dolphin Computer Access (www.yourdolphin.com), Freedom Scientific (www.freedomscientific.com), GW Micro (www.gwmicro.com), Ai Squared (www.aisquared.com), and IBM (www-306.ibm.com/able). Acrobat also provides support for Japanese screen readers from the following companies: Kochi System Development, Inc. (www.aok-net.com), System Solution Center Tochigi, Inc. (www.ssct.co.jp), and IBM Japan (distributor) (www.ibm.com/jp).

Quickly evaluate the accessibility of an Adobe PDF file

When opening a PDF file, blind users have no way of knowing if the document is accessible or if it will read in the proper order. The Reader Quick Check feature in Acrobat 8 and Reader 8 automatically assesses a document's accessibility and informs the user if it is a scanned image or if tags are present. The Accessibility Full Check in Acrobat Professional provides pointers into PDF documents that guide authors by providing steps for repair of accessibility errors in PDF files. In addition to standard PDF accessibility checking, Full Check now evaluates PDF files according to Section 508 and WCAG.

Receive immediate feedback and assistance when accessing untagged PDF files with assistive technology

When you open an untagged PDF file using assistive technology, Acrobat 8 and Reader 8 display the current accessibility settings and allow the user to override these settings for the current document.

Customize the font size in the Bookmarks panel

People with low vision can increase the text size in the Acrobat 8 and Reader 8 Bookmarks panel, making it easier for them to read bookmarks in an Adobe PDF file.

Choose alternate reading orders

Acrobat 8 and Reader 8 offer three options for improving the reading order of text and form fields in nonoptimized Adobe PDF documents. The ability to select a reading order is especially important for users who use screen readers. If one of the following options doesn't appear to be working, try the other alternatives to see if they obtain better results.

- **Let Acrobat choose the reading order**—This default mode determines the document's reading order by looking for columns, boundaries, form fields, and other layout information in the Adobe PDF file.
- **Standard word order**—Acrobat uses the word order within the Adobe PDF document's print instructions.
- **Left to right, top to bottom**—Acrobat reads the page from left to right and top to bottom for single-column documents.

Take advantage of Japanese language support

Both users with disabilities and document authors can utilize the full range of accessibility features when working with Japanese language files.

Use keyboard navigation

Operating a mouse can be difficult or even impossible for individuals with certain disabilities. Contiguous and noncontiguous selection of text, expanded keyboard shortcuts, arrow navigation, and other features enable users to easily navigate menus, toolbars, navigation panels, dialog boxes, the document window, and other parts of the Acrobat 8 and Reader 8 interfaces without using a mouse.

Access and navigate Help more easily

Enhancements to the Acrobat user interface also make it easier to search and navigate Help using the keyboard. The Help file keyboard focus is in the Content pane when opened. You'll find improved instructions on using Help for vision- and motor-impaired users. And a prefix field in the index pane automatically moves to the index item that matches what you're typing.

Navigate the Search panel using keyboard commands

Improvements to the Search feature make it easier to use.

View documents in high-contrast mode

The contrast between text and page background can significantly impact legibility for individuals with low vision. Acrobat 8 and Reader 8 allow users to increase the contrast by replacing a document's specified colors with either custom color schemes created by the user or high-contrast color settings defined in the operating system.

Set your preferences so the cursor automatically appears at the beginning of a page

You can choose to have the text selection cursor focus on the first word on a page whenever you launch Acrobat 8 or Reader 8, making it easier to track where you are when using a screen magnifier.

Automatically open Adobe PDF documents to the last page read

If you've previously opened a PDF file, you can elect to have Acrobat 8 and Reader 8 open to the section where you left off, so you no longer have to search the document to find your place.

Save Adobe PDF content as text

In addition to the previously listed accessibility features, users may save the PDF file as text for special instances such as:

- Using a screen reader that isn't MSAA compliant
- Sending text to a Braille printer
- Testing a document for accessibility (exporting text and reviewing the reading order)
- Adding text from an Adobe PDF file to a document created in another application such as Microsoft Word

Both Acrobat 8 and Reader 8 let you save Adobe PDF content, including alternative text for graphics, as ASCII text files. Acrobat also offers the option to export text to RTF, XML, HTML, and Word (DOC).

- To export text in Reader, choose File > Export Document to Text.
- To export text in Acrobat, choose File > Save As > Text (Accessible) or File > Save As > Rich Text Format or the file format of your choice (XML, HTML, DOC, and so on).

The ability to extract text may be disabled depending on the document's security settings. See "I've heard that adding security to Adobe PDF files makes them inaccessible. Is that true?" to learn about options for reading such files.

Create tagged Adobe PDF files from Microsoft Office applications

Acrobat 8 for Windows allows authors to create tagged Adobe PDF files directly from Microsoft Office 2000 and Office XP for Windows. The tagged file incorporates logical structure and alternative text descriptions for graphics, making it easier for users to navigate a document for proper reading and to understand the meaning of the graphics.

Add security while retaining accessibility

The 128-bit security options available in Acrobat 8 allow authors to prevent the repurposing of content while still allowing the file to remain accessible to assistive technologies via MSAA.

Convert existing Adobe PDF documents to tagged Adobe PDF files

Acrobat 8 automatically analyzes a document's logical structure and creates a new version that approximates the original structure and reading order. In most cases, this file will translate better with a screen reader than will an untagged file. You can also use this tool in conjunction with the Acrobat 8 batch processing function to convert volumes of documents efficiently.

Reduce the size of tagged Adobe PDF files

The Tagged PDF Compression feature in Acrobat 8 improves access to Adobe PDF files by reducing download times.

Check and touch up documents for accessibility

Improvements by the Accessibility Checker and the Add Tags feature in Acrobat 8 Professional simplify the optimization workflow, making it easier to find and correct accessibility problems quickly. You can view and interact with the Accessibility Checker log directly with the Acrobat user interface. The Add Tags to Document report identifies areas in your Adobe PDF file that might need additional optimization, as well as figures and images that require ALT tags. And the Add Tags feature now offers faster, more accurate recognition of complex document structures such as tables for fast and consistent optimization.

Create and optimize accessible Adobe PDF forms

As authors create fillable Adobe PDF forms, Acrobat 8 Professional can automatically insert each new form field into the Tags panel. Tagged Adobe PDF forms allow screen readers to recognize form fields, read any descriptive text associated with the fields, and identify the proper reading order. They also allow recipients to interact with forms using the Read Out Loud feature in Acrobat 8 and Reader 8.

With Acrobat 8 Professional, users also have the option of creating accessible Adobe PDF forms using LiveCycle Designer 8, which is included with Acrobat 8 Professional for Windows. LiveCycle Designer 8 offers a more efficient means for creating accessible forms using XML templates. See "Can I make Adobe PDF forms accessible?" for more information.

Review and modify the tag structure on a page

The Touch Up Read Order tool in Acrobat 8 Professional makes it much easier for users to quickly review and modify a document's reading order and basic object structure.

Q: Can I make Adobe PDF forms accessible?

A: Yes. Adobe offers four options for creating accessible Adobe PDF forms:

- **Acrobat 8 Professional**—Accessibility for PDF forms that are noninteractive has been added. Acrobat 8 Professional's Form Field Recognition feature automatically creates form fields, provides short description labels for screen reader users, and incorporates them into the document structure if it is tagged.
- **Acrobat 8 Professional**—Turn any Adobe PDF document into an Adobe PDF form and add tags for accessibility.

- **Adobe Acrobat Capture® Agent Pack with Adobe PDF Forms Access**—Quickly optimize existing fillable Adobe PDF forms for accessibility.
- **Adobe LiveCycle Designer 8 (included with Acrobat 8 Professional for Windows)**—Author new forms using XML templates, connect them to back-end systems, and automatically generate tagged Adobe PDF forms or accessible HTML forms.

Q: How do I make scanned pages accessible using Acrobat products?

A: Adobe offers paper capture solutions with Acrobat 8 and Acrobat Capture 3.0. Both software packages let you apply optical character recognition (OCR) to the scanned pages. The resulting Adobe PDF files contain computer-generated text, which is necessary for making the document’s information accessible via screen readers and other assistive technologies.

For users who simply want to add a layer of text to their document, the Paper Capture feature in Acrobat 8 provides this functionality. However, Acrobat Capture 3.0 and Acrobat Capture 3.0 Agent Pack offer a much more comprehensive set of tools for working with scanned documents. Acrobat Capture 3.0 makes it possible to ensure accuracy in text output, add navigational elements such as hyperlinks and bookmarks automatically, and process high volumes of scanned documents quickly and easily. In addition, the Acrobat Capture Agent Pack includes a specialized tool that reduces the amount of time it takes to turn a fillable Adobe PDF form into an accessible form.

Following is a summary of the key accessibility capabilities of each product.

Acrobat Capture 3.0—for converting large volumes of paper to accessible Adobe PDF files

- Retain the exact look and feel of the original document while embedding a layer of searchable, accessible text using OCR software.
- Review and fix suspect text quickly and easily with the QuickFix tool.
- Exclude page areas from the OCR process with the Zone tool, so graphics and random text won’t confuse readers.
- Automatically generate hyperlinks and bookmarks based on tables of contents and indexes, so document navigation is easier.

Acrobat Capture Agent Pack—for automatically tagging high volumes of simple Adobe PDF documents and more

The Acrobat Capture Agent Pack includes an Acrobat Capture Agent that supports automated workflows and a standalone utility capable of running on any desktop—even those where Acrobat Capture isn’t installed—thus enhancing the accessibility of Adobe PDF files viewed in Acrobat. For more information on Acrobat Capture, visit www.adobe.com/products/acrcapture/main.html. For more information on the Acrobat Capture Agent Pack, visit www.adobe.com/products/acrcapture/agentpack/main.html.

Q: What makes tagged PDF files more accessible?

A: The ability to tag Adobe PDF documents is part of the PDF specification that allows Adobe PDF files to contain logical document structure such as title page, chapters, sections, and subsections. Tagged Adobe PDF files created in Acrobat 8:

- Include a complete logical structure, incorporating proper page reading order, plus additional information about a document’s contents that substantially increases its accessibility
- Allow precise control over document reading order, including table data and form fields
- Include paragraph attributes, which are necessary for accurate text reflow
- Enable the export of document content and structure to other formats, such as RTF and TXT files
- Support alternative text descriptions for graphics
- Allow accessible interaction with documents such as filling in form fields and following links

- Represent all text as Unicode—a standard for describing text characters—so characters and words are presented to assistive technologies in a clear manner, for example, ensuring spaces at the end of words and differentiating between soft and hard hyphens so a word broken across two lines reads as a single word

Q: Are all of the accessibility features available for both Macintosh and Windows?

A: There are a few areas where Macintosh and Windows functionality differ. These differences are the result of the programming options available to Adobe via the two operating systems or software applications from other vendors.

- **Screen reader support**—Acrobat 8 and Reader 8 for Windows support screen readers via the MSAA API. Vendors that utilize this accessibility standard include Dolphin Computer Access, Freedom Scientific, GW Micro, Ai Squared, and IBM. Adobe incorporated the newest set of accessibility APIs introduced with Mac OS X v.10.2, but there were still no known assistive technologies supporting the Apple API during the development of Acrobat 8. Adobe looks forward to working with its assistive technology partners to develop an accessibility solution for the Mac platform.
- **Automatic creation of tagged Adobe PDF files**—Acrobat 8 for Windows enables authors to create tagged Adobe PDF files directly from Microsoft Office 2000 and Office XP applications.
- **Improved reading experience for untagged Adobe PDF files**—Acrobat 8 and Reader 8 for Windows open a dialog box for users who open untagged Adobe PDF files in Acrobat and Reader using assistive technology.
- **Keyboard navigation**—Acrobat 8 and Reader 8 for Windows offer a wide variety of keyboard options, including noncontiguous text selection, shortcuts, arrow navigation, and an improved Help section that's easier to navigate. Options are more limited with the Macintosh versions of these products.

Q: I've heard that adding security to Adobe PDF files makes them inaccessible. Is that true?

A: Acrobat 8 offers 40-bit and 128-bit encryption for documents. The default settings for both levels allow for accessibility. However, 128-bit encryption provides a specific option that ensures document accessibility for those who depend on assistive technology, such as MSAA-compliant screen readers, while at the same time allowing authors to prevent copying and pasting of text from PDF files. When using 40-bit encryption, if the author doesn't allow content copying and extraction in Acrobat 5.0, then the file is inaccessible. When developing Acrobat 6.0, Adobe worked with assistive technology partners to develop a solution that enables screen readers to read 40-bit encrypted files while preserving copy permissions. This capability is available in the most recent releases of the JAWS (Freedom Scientific), Window-Eyes (GW Micro), and Hal and SuperNova screen readers from Dolphin Computer Access.

Furthermore, the security settings of documents can be easily modified to make them available to screen readers. To change the security settings in an existing document, simply follow these steps:

1. Open the document in Acrobat 8, entering the appropriate password, if required.
2. Choose File > Document Properties, and then select the Security tab.
3. Choose Password Security for the security method.
4. Choose Acrobat 5.0 and later from the Compatibility menu.
5. Select the checkbox "Use a password to restrict printing and editing of the document and its security settings."
6. Select the option "Enable text access for screen reader devices for the visually impaired."
7. Select any other security options, and click OK.

Q: Does Adobe offer training courses on creating accessible Adobe PDF files?

A: Many Adobe Certified Training providers offer training on Adobe software products. To help both customers and trainers understand the subtleties of creating accessible Adobe PDF documents, Adobe offers a number of educational resources on creating accessible content, including how-to guides, a list of training providers, and downloadable training courseware at www.adobe.com/enterprise/accessibility/training.html.

Q: In addition to accessibility, what other advantages do Adobe PDF files offer?

A: Adobe PDF documents and forms offer a number of advantages:

- Digital signature capability
- Consistent access to Adobe PDF content across multiple platforms using free Adobe Reader
- Ability to leverage the same document or form for both print and the web
- Document integrity, with fonts, layout, and colors preserved
- Ability to convert and combine multiple documents from various applications into one compact, accessible Adobe PDF file
- Document security

Q: What resources are available to help me learn more about Adobe products and accessibility?

A: There are a variety of resources on the Adobe website, including additional information on reading and creating accessible content and government accessibility compliance (such as Section 508), as well as a free online tool for converting PDF files to HTML or ASCII text.

Visit www.adobe.com/enterprise/accessibility to see all the available resources.

Summary of key accessibility capabilities in the Acrobat 8 family

Reading Adobe PDF files					
Feature	Reader 8*	Acrobat 8 Standard	Acrobat 8 Professional	Windows	Mac OS X
New: Form fields are now automatically recognized, created, and tagged for accessibility.			•	•	•
New: Accessibility for forms that are noninteractive has been added.			•	•	•
New: A Table Inspector for improving the accessibility of tables in PDF files has been added to the Touch Up Read Order tool in Acrobat 8 Professional.			•	•	•
Improved: Quickly evaluate the accessibility of an Adobe PDF file. The Accessibility Checker in Acrobat 8 Professional now performs additional tests for compliance with Section 508 and Web Content Accessibility Guidelines (WCAG 1.0 and WCAG 2.0 DRAFT).			•	•	•
Improved: The automatic tagging of PDF files is now faster and more accurate.		•	•	•	•
Improved: Read PDF files and forms out loud using standard operating system text-to-speech synthesis. Acrobat 8 and Reader 8 highlight the paragraph being read. Users can skip forward or backward within the document.	•	•	•	•	•
Improved: Take advantage of advanced reading functions using Windows based screen readers.	•	•	•	•	
Zoom in on text and reflow it to fit any size view in both tagged and untagged PDF files.	•	•	•	•	•
Use the preferences wizard to configure Acrobat and Reader for accessibility.	•	•	•	•	•
Receive immediate feedback and assistance when accessing untagged PDF files with assistive technology.	•	•	•	•	•
Customize the font size in the Bookmarks panel.	•	•	•	•	•
Choose alternate reading orders.	•	•	•	•	•
Take advantage of Japanese language support.	•	•	•	•	•
Use keyboard navigation.	•	•	•	•	•
Access and navigate Help more easily.	•	•	•	•	•
Navigate the Search panel using keyboard commands.	•	•	•	•	•

Feature	Reader 8*	Acrobat 8 Standard	Acrobat 8 Professional	Windows	Mac OS X
View documents in high-contrast mode.	•	•	•	•	•
Set your preferences so the cursor automatically appears at the beginning of a page.	•	•	•	•	•
Automatically open Adobe PDF files to the last page read.	•	•	•	•	•
Save Adobe PDF content as text (TXT) files.	•	•	•	•	•
Export text from Adobe PDF files to Rich Text Format (RTF), XML, HTML, and Word (DOC).		•	•	•	•
Creating accessible Adobe PDF files					
Create tagged Adobe PDF files from Microsoft Office applications.†		•	•	•	
Add security while retaining accessibility.†		•	•	•	•
Convert existing Adobe PDF documents to tagged Adobe PDF files.		•	•	•	•
Reduce the size of tagged Adobe PDF files for faster downloads.		•	•	•	•
Add text to scanned pages for improved accessibility.		•	•	•	•
Optimizing Adobe PDF files for accessibility					
Check and touch up documents for accessibility.			•	•	•
Create and optimize accessible Adobe PDF forms.			•	•	•
Review and modify the tag structure on a page.			•	•	•

* Included in Acrobat

† Also a feature in Adobe Acrobat Elements software, available only through volume licensing



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