

Adobe Acrobat 5.0

and Section 508

Adobe Acrobat 5.0 and Section 508

On December 21, 2000, the Architectural and Transportation Barriers Compliance Board (Access Board) issued final accessibility standards for electronic and information technology covered by section 508 of the Rehabilitation Act Amendments of 1998. These standards set forth a definition of electronic and information technology and the technical and functional performance criteria necessary for such technology to be accessible.

Adobe has made significant enhancements to Acrobat 5.0 that improve the accessibility of both Adobe® Acrobat® software and the information contained in Adobe Portable Document Format (PDF) files. This was done with the intent to enable agencies to be compliant with the Section 508 regulations.

Adobe offers the following background information to help our customers understand the accessibility features of Adobe Acrobat 5.0 software, including Acrobat Reader 5.0, in the context of the Section 508 standards. This document is not intended to be a certification of compliance.

The document contains subsets of the Electronic and Information Technology Accessibility Standards as published in 36 CFR Part 1194 and provides an analysis of Acrobat 5.0 as compared to these standards.

Adobe Acrobat 5.0 and Accessibility Overview

Adobe Acrobat 5.0 software provides a number of new capabilities that improve the accessibility of both Adobe Acrobat software and the information contained in Adobe PDF files. Here are a few highlights.

Adobe Acrobat 5.0 and Adobe Acrobat Reader 5.0	
Read PDF documents with screen readers	Provides direct support for screen readers via the Microsoft® Active Accessibility (MSAA) Application Programming Interface (API) for the Windows® platform. MSAA lets Acrobat 5.0 integrate with assistive technology products including the newest versions of screen readers from vendors such as Freedom Scientific and GW Micro.
Use keyboard navigation	Provides enhanced keyboard navigation for users with a broad range of disabilities.
Improve onscreen viewing	Supports high-contrast viewing and the ability to zoom in and reflow text on the screen for users with low vision.

Adobe Acrobat 5.0	
Create PDF files that are optimized for accessibility	Allows document authors to create tagged Adobe PDF files from Microsoft Office 2000 for Windows applications, incorporating logical structure information and making it easier for users of screen reader software to navigate a document in the proper reading order.
Optimize legacy PDF files for accessibility	Transforms an untagged PDF file into a tagged Adobe PDF file via the Make Accessible plug-in for Acrobat 5.0 for Windows. The resulting files can be read more clearly with assistive technology.
Add text to scanned pages	Applies Optical Character Recognition (OCR) to scanned pages. The resulting files contain computer-generated text, which is a requirement for use with assistive technology. OCR is offered via the Paper Capture plug-in for Acrobat 5.0 for Windows or online services for Macintosh users.
Check and touch-up documents for accessibility	Includes tools to help optimize Adobe PDF files for accessibility. The accessibility checker analyzes a document and identifies common accessibility problems. The tags palette lets the author review and touch up document read order and add new elements to the document structure such as form fields or alternative text descriptions for images in a document.
Repurpose text	Supports export of text from a tagged Adobe PDF file to RTF or to XML, HTML, or Text via the Save As XML plug-in for Macintosh or Windows users. The resulting files can be repurposed for a variety of applications including word processors and non-MSAA compliant screen readers.
Secure without disabling accessibility	Provides new levels of security, making it possible for an author to prevent copying and pasting of document content while still making it accessible to assistive technologies via MSAA.

Adobe Acrobat 5.0 and Section 508 Detailed Analysis

Section 1194.21 Software applications and operating systems

The following table indicates functionality of four different versions of Adobe Acrobat 5.0 software. Adobe Acrobat 5.0 Full Product refers to the for-fee version of the software that allows users to create, modify, and interact with Adobe PDF files. Adobe Acrobat Reader 5.0 is available as a free download from the Adobe Web site and allows users to view, read and print Adobe PDF files.

Section 508 Reference	Adobe Acrobat 5.0 Functionality	Acrobat 5.0 Full Product Windows	Acrobat 5.0 Full Product Macintosh	Acrobat 5.0 Reader Windows	Acrobat 5.0 Reader Macintosh
Keyboard Access (a) When software is designed to run on a system that has a keyboard, product functions shall be executable from a keyboard where the function itself or the result of performing a function can be discerned textually.	Keyboard navigation is provided for all menu commands in Adobe Acrobat Reader.50	Not Applicable	Not Applicable	Yes	Yes
	All Keyboard navigation available in Adobe Acrobat Reader is also available in the full Adobe Acrobat 5.0 product. Some functions in full Acrobat, such as freehand drawing tools for electronic markup of Adobe PDF files and creation of hyperlinks, are not keyboard accessible	Yes With some exceptions	Yes With some exceptions	Not Applicable	Not Applicable
Accessibility Features (b) Applications shall not disrupt or disable activated features of other products that are identified as accessibility features, where those features are developed and documented according to industry standards. Applications also shall not disrupt or disable activated features of any operating system that are identified as accessibility features where the application programming interface for those accessibility features has been documented by the manufacturer of the operating system and is available to the product developer.	Testing of Adobe Acrobat 5.0 has not indicated that the product will disrupt or disable accessibility features of other products or operating systems.	Yes	Yes	Yes	Yes
On-screen focus and tracking (c) A well-defined on-screen indication of the current focus shall be provided that moves among interactive interface elements as the input focus changes. The focus shall be programmatically exposed so that assistive technology can track focus and focus changes	Adobe Acrobat 5.0 provides on-screen indication of current focus that moves among interactive interface elements as the input focus changes.	Yes	Yes	Yes	Yes
	Focus is programmatically exposed through the Microsoft Active Accessibility (MSAA) Application Programming Interface (API) in Adobe Acrobat 5.0 for Windows. No comparable standard for exposing focus programmatically existed on the Macintosh platform during the development of Acrobat 5.0.	Yes	No	Yes	No
Information about user interface elements (d) Sufficient information about a user interface element including the identity, operation and state of the element shall be available to assistive technology. When an image represents a program element, the information conveyed by the image must also be available in text.	Adobe Acrobat 5.0 for Windows provides information about user interface elements through the MSAA API. No comparable standard existed on the Macintosh platform during the development of Acrobat 5.0.	Yes	No	Yes	No

<p>Consistent Meaning of Images (e) When bitmap images are used to identify controls, status indicators, or other programmatic elements, the meaning assigned to those images shall be consistent throughout an application's performance.</p>	<p>The Adobe Acrobat 5.0 user interface consistently uses bitmap images to identify controls, status indicators or other programmatic elements.</p>	Yes	Yes	Yes	Yes
<p>Availability of textual information (f) Textual information shall be provided through operating system functions for displaying text. The minimum information that shall be made available is text content, text input caret location, and text attributes.</p>	<p>Adobe Acrobat 5.0 for Windows provides textual information through the MSAA API including text content and text input caret location. Text attributes are not supported.</p> <p>No comparable standard for exposing focus programmatically existed on the Macintosh platform during the development of Acrobat 5.0. Adobe provides free online PDF-to-text, or PDF-to-HTML conversion services for users that can't take advantage of MSAA tools on the Window platform. In addition Macintosh users can export tagged Adobe PDF files to RTF, XML, HTML, or text.</p>	<p>Yes except text attributes ----- Includes option to save as RTF, XML, HTML, Text</p>	<p>Web-based conversion services offered ----- Includes option to save as RTF, XML, HTML, Text</p>	Yes except text attributes	Web-based conversion services offered
<p>Contrast and color settings (g) Applications shall not override user selected contrast and color selections and other individual display attributes.</p>	<p>Adobe Acrobat 5.0 does not override user selected contrast and color settings when they are available in the operating system.</p> <p>Adobe Acrobat 5.0 for Windows also has the ability to automatically adopt the color and contrast settings of the Windows operating system in the Acrobat user interface and in the display of an Adobe PDF file.</p>	Yes	Yes	Yes	Yes
<p>Animation (h) When animation is displayed, the information shall be displayable in at least one non-animated presentation mode at the option of the user.</p>	<p>Generally, PDF files are not used for the creation and distribution of animated content. However, Adobe Acrobat 5.0 provides support for Java Script, which could be used by the creator of an Adobe PDF file to animate elements on a page. Creators of Adobe PDF files should make sure any animation is done in a manner that is consistent with the standard. Acrobat software also has the ability to support the display of QuickTime movies. Adobe advises customers to review the accessibility options of QuickTime software to determine if QuickTime content in an Adobe PDF file will meet their accessibility objectives.</p>	Yes	Yes	Yes	Yes
<p>Color Coding (i) Color coding shall not be used as the only means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.</p>	<p>The Adobe Acrobat 5.0 user interface does not use color as the only means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.</p>	Yes	Yes	Yes	Yes
<p>Variety of color selections (j) When a product permits a user to adjust color and contrast settings, a variety of color selections capable of producing a range of contrast levels shall be provided.</p>	<p>Adobe Acrobat 5.0 allows users to customize the contrast and color settings of the text and background of an Adobe PDF file to a wide range of colors supported by their system.</p>	Yes	Yes	Yes	Yes
	<p>Adobe Acrobat 5.0 software for Windows also has the ability to automatically adopt the color and contrast settings of the Windows operating system in the Acrobat user interface and in the display of an Adobe PDF file.</p>	Yes	Not Applicable	Yes	Not Applicable
<p>Flash or blink frequency (k) Software shall not use flashing or blinking text, objects, or other elements having a flash or blink frequency greater than 2 Hz and lower than 55 Hz.</p>	<p>Adobe Acrobat 5.0 software does not use flashing or blinking text, objects or other elements in the software's user interface.</p>	Yes	Yes	Yes	Yes

<p>Interaction with electronic forms (l) When electronic forms are used, the form shall allow people using assistive technology to access the information, field elements, and functionality required for completion and submission of the form, including all directions and cues.</p>	<p>Adobe Acrobat 5.0 for Windows and Macintosh enables people with motor impairments, low vision and other disabilities excluding blindness, to interact with, complete and submit forms through the use of keyboard navigation.</p> <p>For people with blindness, Adobe Acrobat 5.0 for Windows enables screen readers to access the information, field elements and functionality required for completion and submission of Adobe PDF forms when those forms have been authored in a manner that optimizes them for accessibility. This functionality is delivered via the MSAA API on the Windows platform. No comparable standard existed on the Macintosh platform during the development of Acrobat 5.0. For more information, see "How to Create Accessible Adobe PDF Files" at: http://access.adobe.com.</p>	Yes	Yes Except screen reader support	Yes	Yes Except screen reader support
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Section 1194.22 Web-based intranet and internet information and applications

Section 508 Reference	Adobe Acrobat 5.0 Functionality	Acrobat 5.0 Full Product Windows	Acrobat 5.0 Full Product Macintosh	Acrobat 5.0 Reader Windows	Acrobat 5.0 Reader Macintosh
<p>ALT Tags (a) A text equivalent for every non-text element shall be provided (e.g., via "alt", "longdesc", or in element content).</p>	<p>The Adobe PDF 1.4 specification provides the ability to encode text equivalents for non-textual information, such as graphics and images, and to provide expanded textual descriptions for elements such as form fields or abbreviations. These files are called "tagged" Adobe PDF files. These text equivalents can be exposed to assistive technologies through the support of MSAA interface in Acrobat 5.0 for Windows. Adobe Acrobat 5.0 lets document authors add or modify these text equivalents.</p>	Author's discretion	Author's discretion	Not Applicable	Not Applicable
	<p>Adobe Acrobat 5.0 for Windows can automatically create Adobe PDF files that include alternate text specified in Microsoft Office 2000 documents.</p>	Not Applicable	No	Not Applicable	Not Applicable
<p>Multimedia alternatives (b) Equivalent alternatives for any multimedia presentation shall be synchronized with the presentation.</p>	<p>Adobe PDF does not provide inherent support for multimedia although an Adobe PDF file may contain multimedia elements from other sources, such as QuickTime movies. Creators of Adobe PDF files should review the accessibility capabilities of QuickTime and other multimedia formats before including them in an Adobe PDF file.</p>	Author's discretion	Author's discretion	Not Applicable	Not Applicable
<p>Color information on Web pages (c) Web pages shall be designed so that all information conveyed with color is also available without color, for example from context or markup.</p>	<p>Adobe PDF supports the ability to display any type of page layout and design, including arbitrary uses of color with fonts, backgrounds, etc. The creators of Adobe PDF files should review the page layout and design to make sure it uses color in a manner consistent with the standard.</p>	Author's discretion	Author's discretion	Not Applicable	Not Applicable
<p>Reliance on style sheets (d) Documents shall be organized so they are readable without requiring an associated style sheet.</p>	<p>Not applicable to PDF. Style sheets are a concept applied to Web pages created in markup languages such as HTML.</p>	Not Applicable	Not Applicable	Not Applicable	Not Applicable
<p>Server-side image maps (e) Redundant text links shall be provided for each active region of a server-side image map.</p>	<p>Not applicable to PDF. Image maps are used by Web pages created in HTML.</p>	Not Applicable	Not Applicable	Not Applicable	Not Applicable

<p>Client-side image maps (f) Client-side image maps shall be provided instead of server-side image maps except where the regions cannot be defined with an available geometric shape.</p>	<p>Not applicable to PDF. Image maps are used by Web pages created in HTML.</p>	<p>Not Applicable</p>	<p>Not Applicable</p>	<p>Not Applicable</p>	<p>Not Applicable</p>
<p>Data table headers (g) Row and column headers shall be identified for data tables.</p>	<p>The Adobe PDF 1.4 specification enables customers to preserve markup in tables in an Adobe PDF file, including table rows, header cells and data cells. Acrobat 5.0 for Windows enables users to create tagged Adobe PDF files automatically from Microsoft Office 2000 for Windows applications. If the author defines table rows, header cells and data cells in the application, Acrobat 5.0 will automatically include that information in the PDF file. Users of Macintosh or Windows versions can create or edit data table header information using the Acrobat tags palette. For more information, see the White Paper "Enhancing the Accessibility of the Web with Adobe Acrobat software".</p>	<p>Author's discretion ----- via MS Office export or tags palette</p>	<p>Author's discretion ----- create or edit information via tags palette only</p>	<p>Not Applicable</p>	<p>Not Applicable</p>
<p>Data table markup (h) Markup shall be used to associate data cells and header cells for data tables that have two or more logical levels of row or column headers.</p>	<p>See the response in "data table headers".</p>	<p>Author's discretion</p>	<p>Author's discretion</p>	<p>Not Applicable</p>	<p>Not Applicable</p>
<p>Frame titles (i) Frames shall be titled with text that facilitates frame identification and navigation</p>	<p>Not applicable to PDF. Frames are a concept associated with viewing multiple HTML pages simultaneously in a Web browser.</p>	<p>Not Applicable</p>	<p>Not Applicable</p>	<p>Not Applicable</p>	<p>Not Applicable</p>
<p>Screen Flicker (j) Pages shall be designed to avoid causing the screen to flicker with a frequency greater than 2 Hz and lower than 55 Hz.</p>	<p>Adobe PDF files are typically static files that do not cause the screen to flicker. Adobe Acrobat 5.0 software does provide support for Java Script, which could be used by the creator of an Adobe PDF file to cause elements on a page to flicker. Creators of Adobe PDF files using Java Script in this way should insure that flickering elements are within the tolerances defined in the standard.</p>	<p>Author's discretion</p>	<p>Author's discretion</p>	<p>Not Applicable</p>	<p>Not Applicable</p>
<p>Equivalent Information (k) A text-only page, with equivalent information or functionality, shall be provided to make a web site comply with the provisions of this part, when compliance cannot be accomplished in any other way. The content of the text-only page shall be updated whenever the primary page changes.</p>	<p>Adobe Acrobat 5.0 for Windows provides an extensive tool set to help authors create tagged Adobe PDF files that provide accessible content for users with disabilities so that only one version of the document can be used. For more information, see the White Paper "Enhancing the Accessibility of the Web with Adobe Acrobat software", or the booklet "How To Create Accessible Adobe PDF Files".</p>	<p>Author's discretion -----</p>	<p>No</p>	<p>Not Applicable</p>	<p>Not Applicable</p>
	<p>If an author does want to convert Adobe PDF files into other formats, Adobe has multiple tools to assist with this process. Adobe Acrobat 5.0 enables Adobe PDF files to be saved as Rich Text Format (RTF) files. The "Save As XML" plug-in allows the user to save as XML, HTML, or text and is available at http://www.adobe.com/support/downloads/89a2.htm. These formats can be accessed using standard tools such as word processors. Adobe also offers on-line services through http://access.adobe.com, that allow users to convert Adobe PDF files to plain text or HTML.</p>	<p>Save as RTF, XML, HTML, Text</p>	<p>Save as RTF, XML, HTML, Text</p>	<p>Web-based conversion services to HTML or text</p>	<p>Web-based conversion services to HTML or text</p>

Scripting languages (l) When pages utilize scripting languages to display content, or to create interface elements, the information provided by the script shall be identified with functional text that can be read by assistive technology.	Adobe Reader 5.0 does not support scripting languages to dynamically display content or interface elements in an Adobe PDF file.	Not Applicable	Not Applicable	Not Applicable	Not Applicable
	Adobe Acrobat 5.0 includes support for Java Script, which could be used to create Adobe PDF files that display content or create interface elements. Java Script information identified with functional text cannot be passed to assistive technology in Acrobat 5.0.	No	No	Not Applicable	Not Applicable
Link to required applications (m) When a web page requires that an applet, plug-in or other application be present on the client system to interpret page content, the page must provide a link to a plug-in or applet that complies with /1194.21(a) through (l).	Adobe Acrobat Reader 5.0 is a free downloadable application available from adobe.com that allows users to view, read, and print Adobe PDF files across a broad range of hardware and operating systems. Web masters are encouraged to link the main Acrobat Reader page at: http://www.adobe.com/products/acrobat/readstep.html .	Not Applicable	Not Applicable	Web master's discretion	Web master's discretion
Interaction with electronic forms (n) When electronic forms are designed to be completed on-line, the form shall allow people using assistive technology to access the information, field elements, and functionality required for completion and submission of the form, including all directions and cues.	Adobe Acrobat 5.0 allows authors to optimize Adobe PDF forms for accessibility. These optimized forms can enable people using assistive technologies to access the information, field elements and functionality required for completion and submission of Adobe PDF forms. For more information on how to optimize Adobe PDF forms for accessibility, see "How to Create Accessible Adobe PDF Files" at: http://access.adobe.com . The ability to submit an Adobe PDF form using assistive technology is dependent upon the location of the PDF file and the software being used. Adobe PDF forms can be downloaded to the users local system or be interacted with inside a Web browser. * If the file resides on the server and is presented in an accessible Web browser such as Internet Explorer 5.5 or higher, submission is enabled via the browser's network services * If the file resides locally and is running in full Acrobat 5.0, submission is enabled via Acrobat network services * If the file resides locally and is running in Acrobat Reader, submission is not enabled.	Author's discretion	Author's discretion	Yes ---- Except local file submission	Yes ---- Except local file submission
Repetitive links (o) A method shall be provided that permits users to skip repetitive navigation links.	Adobe PDF files may contain navigation links. Creators of Adobe PDF files should make sure any navigation links are used in a manner that is consistent with the standard.	Author's discretion	Author's discretion	Not Applicable	Not Applicable
Timed response (p) When a timed response is required, the user shall be alerted and given sufficient time to indicate more time is required.	Adobe Acrobat 5.0 includes support for Java Script, which could be used to create Adobe PDF files with timed responses. Creators of Adobe PDF files should make sure any timed responses are used in a manner that is consistent with the standard.	Author's discretion	Author's discretion	Not Applicable	Not Applicable

Section 1194.31 Functional Performance Criteria

Section 508 Reference	Adobe Acrobat 5.0 Functionality	Acrobat 5.0 Full Product Windows	Acrobat 5.0 Full Product Macintosh	Acrobat 5.0 Reader Windows	Acrobat 5.0 Reader Macintosh
<p>Alternate for visual impairment (a) At least one mode of operation and information retrieval that does not require user vision shall be provided, or support for assistive technology used by people who are blind or visually impaired shall be provided.</p>	<p>Provides direct support for screen readers via the Microsoft® Active Accessibility (MSAA) Application Programming Interface (API) for the Windows® platform. MSAA lets Acrobat 5.0 integrate with assistive technology products including newer versions of screen readers from vendors such as Freedom Scientific and GW Micro.</p> <p>Supports high-contrast viewing and the ability to zoom in and reflow text on the screen for users with low vision.</p>	Yes	Yes	Yes	Yes
<p>Enhancement for low vision (b) At least one mode of operation and information retrieval that does not require visual acuity greater than 20/70 shall be provided in audio and enlarged print output working together or independently, or support for assistive technology used by people who are visually impaired shall be provided.</p>	<p>Provides direct support for screen readers via the Microsoft® Active Accessibility (MSAA) Application Programming Interface (API) for the Windows® platform. MSAA lets Acrobat 5.0 integrate with assistive technology products including newer versions of screen readers from vendors such as Freedom Scientific and GW Micro.</p> <p>Supports high-contrast viewing and the ability to zoom in and reflow text on the screen for users with low vision.</p>	Yes	Yes	Yes	Yes
<p>Alternate for no hearing (c) At least one mode of operation and information retrieval that does not require user hearing shall be provided, or support for assistive technology used by people who are deaf or hard of hearing shall be provided</p>	<p>Adobe Acrobat 5.0 does not require user hearing in order to operate the software.</p>	Not Applicable	Not Applicable	Not Applicable	Not Applicable
	<p>Adobe Acrobat 5.0 does support the ability to play audio files, such as .wav or QuickTime files that may be embedded in an Adobe PDF. Creators of Adobe PDF files that include audio files should make sure this is done in a manner that is consistent with the standard.</p>	Author's discretion	Author's discretion	Author's discretion	Author's discretion
<p>Enhancement for auditory information (d) Where audio information is important for the use of a product, at least one mode of operation and information retrieval shall be provided in an enhanced auditory fashion, or support for assistive hearing devices shall be provided.</p>	<p>Adobe Acrobat 5.0 does not require user hearing in order to operate the software.</p>	Not Applicable	Not Applicable	Not Applicable	Not Applicable
	<p>Adobe Acrobat 5.0 does support the ability to play audio files, such as .wav or QuickTime files that may be embedded in an Adobe PDF. Creators of Adobe PDF files that include audio files should make sure this is done in a manner that is consistent with the standard.</p>	Author's discretion	Author's discretion	Author's discretion	Author's discretion
<p>Alternate for speech impairment (e) At least one mode of operation and information retrieval that does not require user speech shall be provided, or support for assistive technology used by people with disabilities shall be provided.</p>	<p>Adobe Acrobat 5.0 does not require user speech to operate the software.</p>	Not Applicable	Not Applicable	Not Applicable	Not Applicable

Alternate for fine motor control (f) At least one mode of operation and information retrieval that does not require fine motor control or simultaneous actions and that is operable with limited reach and strength shall be provided.	Keyboard navigation is provided for all menu commands in Adobe Acrobat Reader 5.0.	Not Applicable	Not Applicable	Yes	Yes
	All keyboard navigation available in Adobe Acrobat Reader is also available in the full Adobe Acrobat 5.0 product. Some functions in full Acrobat, such as free-hand drawing tools for electronic markup of Adobe PDF files and creation of hyperlinks, are not keyboard accessible.	Yes With some exceptions	Yes With some exceptions	Not Applicable	Not Applicable

Note: This document highlights differences between the accessibility options available on the Windows versus the Macintosh platform. The Windows platform was targeted for development first because of its level of adoption in US Federal agencies and because Microsoft Office software for Windows represents the most broadly used tools in the marketplace. Adobe's development efforts represent only the first step in providing tools to help authors create accessible content. We're committed to ongoing efforts in this regard. And, we will continue to evaluate the product and the needs of the customers and will respond to what the market demands. For further detail on accessibility feature differences between the two platforms, see "Adobe Acrobat 5.0 Accessibility FAQ" at <http://access.adobe.com>.

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