



## Kentucky Assistive Technology Service (KATS) Network

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### Tutorial on Accessible PDF Documents

#### Introduction

The following resources are meant to provide guidance in creating accessible PDF documents for posting on the internet and sending through e-mail. Creating accessible PDF documents will allow for greater accessibility and usability for everyone, including users of text to speech software by persons who are blind or who have other text or print disabilities, as well as achieving Section 508 compliance where applicable. (See Section 508 Compliance and What is Section 508 below.)

PDF documents are widely used on the internet and in email because they allow the author to preserve all the fonts, formatting, colors, and graphics of the source document regardless of the application and platform that was used to create it.

Common uses for PDF include: newsletters, brochures, memos, contracts, lengthy documents, archival documents, providing a print version of a web page or other document types, interactive forms, fact sheets, etc.

When most people talk about accessible PDF documents, they generally are referring to PDF "tags". Tags provide a navigable structure to a PDF document for screen reader users; however, it should be noted that there is more to PDF accessibility than just PDF tags.

#### The Benefits of an Accessible PDF Document

- ⇒ Text that is searchable and selectable
  - ⇒ A characteristic of an accessible PDF is that the text can be searched and selected, copied and pasted by the end user. An accessible PDF can also be converted to plain text by the end user for use with Braille printers. Content is readable by screen readers and search engines (when posted online).
- ⇒ Images and form fields contain alternative text descriptions
  - ⇒ Allows for screen reader access to these parts of a PDF document
- ⇒ Logical reading order and structure is defined by PDF tags
  - ⇒ To present a document's text in a way that makes sense to users of screen readers (or other text to speech software), the document must be structured using headers, paragraphs, lists, sections, tables of contents, and other page elements.
- ⇒ Navigational Aids
  - ⇒ Navigational aids include hyperlinks, headings, tables of contents, bookmarks, form field tab order, etc., assist all users to easily move through the document without having to read entirely through word by word. Bookmarks are especially useful (providing a navigable outline structure) and can be created from the document's headings.
- ⇒ When using the Zoom, text can be "reflowed" to fit the screen
  - ⇒ You can reflow a PDF to temporarily present it as a single column that is the width of the document pane. The reflow view can make the document easier to read on the small screen of a mobile device or on a standard monitor at a large magnification, without the need to scroll horizontally to read each line of text.
  - ⇒ Text that doesn't reflow includes forms, comments, digital signature fields, and page artifacts, such as page numbers, headers, and footers. Vertical text reflows horizontally.
- ⇒ Text and background colors can be changed by the end user (using Adobe Reader)
  - ⇒ You can choose from a list of contrasting color combinations for text and background, or you can create your own. These settings correspond to the Use High Contrast Colors for Document Text option in the Accessibility Setup Assistant in Adobe Reader.

- ⇒ Document language
  - ⇒ Specifying the document language in a PDF enables some screen readers to switch to the appropriate language when reading the document.
- ⇒ Security features (such a password protection and Digital Rights Management) do not interfere with assistive technologies.
  - ⇒ PDF documents can be protected to restrict users from printing, copying, extracting, adding to or editing text. The text of an accessible PDF document must be available to users of screen readers and other text to speech software. Adobe Acrobat Pro can be used to check that security settings do not interfere with screen reader access.

## Creating Accessible PDF documents

While there are numerous tutorials, guidelines and fact sheets already published on the internet covering this topic, rather than re-inventing the wheel, we will provide you a short overview of creating accessible PDF documents along with links to several in-depth resources that you can peruse at your own leisure.

Creating accessible PDF documents is essentially a two step process:

1. creating an accessible source document (such as Word, etc), and
2. converting the source document to PDF.

While it is possible to create an accessible PDF document from a scanned paper copy, the steps to do so are much more cumbersome and time consuming than converting the original electronic document to PDF. By default, a scanned document will not be accessible, and often times will not be able to be read by screen readers at all unless it is scanned using Optical Character Recognition (OCR) software.

### Step One

The first step to creating an accessible PDF document is to start with an accessible source document, such as a Word (.doc) document. This includes using Styles (headers, paragraphs, lists, etc) to maintain a proper structure to the document, providing alternative text for images, and using proper link text.

#### For more guidance on creating an accessible Word (.doc) document:

- ⇒ [WebAIM article on creating accessible Word documents](#)
- ⇒ [CATEA Guidelines for accessible Word documents](#)
- ⇒ [CATEA Printable Fact Sheet on accessible Word documents \(PDF\)](#)
- ⇒ [CATEA self-paced tutorial for creating accessible Word documents](#)
- ⇒ [Accessible Microsoft Word Files \(.doc\)](#)
- ⇒ [NC State Accessible IT tutorial on accessible Word documents](#)
- ⇒ [Microsoft self-paced tutorials for creating accessible Office documents](#)

### Step Two

The second step is to convert the source document to PDF. There are several simple techniques that can be used to convert your source document to an accessible PDF document. Step-by-step instructions can be accessed from the list of links below.

For Microsoft Word 2003, you will need to have [Adobe Acrobat Pro](#) (version 7 or later) installed on your computer. With Adobe Acrobat Pro installed, you will have a new menu item in Word called "Adobe PDF", with an option to "Convert to Adobe PDF". Creating the document by "printing" to PDF will not produce an accessible PDF document; you must use the "Convert to Adobe PDF" option in the "Adobe PDF" menu to ensure accessibility. You cannot use the [free Adobe Reader](#) to create PDF files, though it can be used to open and read PDF files.

For Microsoft Word 2007, you can download a free [Save as PDF add-in](#) for converting Word documents to PDF (without the need to install Adobe Acrobat Pro).

You can also use OpenOffice.org Writer to convert text documents to accessible PDF documents.

[OpenOffice.org](#) is a free open-source office suite and includes its own PDF converter which can be used to create accessible PDF documents.

## For more guidance on converting Word documents to PDF:

- ⇒ [WebAIM article on converting documents to PDF](#)
- ⇒ [CATEA guidelines for accessible PDF documents](#)
- ⇒ [CATEA Printable Fact Sheet on Making PDF Files Accessible for Students \(PDF\)](#)
- ⇒ [CATEA self-paced tutorial for making PDF documents accessible](#)
- ⇒ [Guide to creating accessible PDF documents from section508.gov \(PDF\)](#)
- ⇒ [NC State Accessible IT tutorial on accessible PDF documents](#)
- ⇒ [Making PDF files accessible from Web Accessibility for All](#)
- ⇒ [Creating Accessible Adobe PDF Files: A Guide for Document Developers \(PDF\)](#)
- ⇒ [Adobe Acrobat Accessibility page](#)
- ⇒ [Adobe Accessibility Resource Center](#)
- ⇒ [Adobe guide on "How to Create Accessible Adobe PDF Files" \(PDF\)](#)
- ⇒ [Adobe guide on "Advanced Techniques for Creating Accessible Adobe PDF Files" \(PDF\)](#)
- ⇒ [Setting Accessibility Preferences in Adobe Reader](#)

## Section 508 Compliance

Section 508 was enacted to eliminate barriers in information technology, to make available new opportunities for people with disabilities, and to encourage development of technologies that will help achieve these goals. The law applies to all Federal agencies when they develop, procure, maintain, or use electronic and information technology. Under Section 508 of the Rehabilitation Act (29 U.S.C. 794d), as amended by the Workforce Investment Act of 1998 (P.L. 105-220), August 7, 1998, agencies must give disabled employees and members of the public access to information that is comparable to the access available to others.

## What is Section 508?

In 1998, Congress amended the Rehabilitation Act and strengthened provisions covering access to information in the Federal sector. As amended, section 508 of the Rehabilitation Act requires access to the Federal government's electronic and information technology. It applies to all Federal agencies when they develop, procure, maintain, or use such technology. Federal agencies must ensure that this technology is accessible to employees and the public to the extent it does not pose an "undue burden." The law directs the [Access Board](#) to develop access standards for this technology that will become part of the Federal procurement regulations.

The scope of Section 508 is limited to the Federal sector. It does not apply to the private sector, nor does it generally impose requirements on the recipients of Federal funds with the exception of activities carried out in a State under the Assistive Technology Act of 1998, as amended pursuant to section 4(d)(6)(G) of that act. However, many states have also passed legislation requiring electronic and information technology accessibility that follow in the same spirit as the Section 508 standards. Additional information related to state accessibility laws can be found in the links below.

## For more guidance on the Section 508 law and standards:

- ⇒ [Section 508 Homepage: Electronic and Information Technology](#)
- ⇒ [Electronic and Information Technology Standards: An Overview](#)
- ⇒ [Electronic and Information Technology Accessibility Standards \(Section 508\)](#)
- ⇒ [Guide to the Section 508 Standards for Electronic and Information Technology](#)
- ⇒ [Section508.gov](#)
- ⇒ [A National Assessment of State E&IT Accessibility Initiatives](#)
- ⇒ [Accessible Information Technology Laws, Policies and Guidelines by State](#)
- ⇒ [Kentucky Accessible Information Technology Statute](#)

## How Section 508 applies to PDF Documents posted on the internet

Section 1194.22(m) requires the web page containing a PDF file to include a link to a plug-in that complies with the software requirements of 1194.21(a) through (l). In addition, section 1194.22(a) requires provision of a text equivalent for every non-text element.

In order to view a PDF file, a user must use a browser "plug-in" (i.e: Adobe Reader). Thus, an agency has two options when addressing PDF content and the Access Board's standards. First, it can ensure that its PDF file is accessible and include a link to a PDF reader that conforms to the software requirements of section 1194.21. Alternatively, if such a plug-in is unavailable, section 1194.22(k) permits the agency to provide a link to a duplicate file that contains the same information in an accessible format.

### **For more guidance on Section 508 and how it applies to PDF documents posted online:**

- ⇒ [PDF Content: Strategies for 508 Compliance \(PDF\)](#)
- ⇒ [Electronic and Information Technology Accessibility Standards \(Section 508\)](#)
- ⇒ [Web Accessibility for Section 508 from JimThatcher.com](#)
- ⇒ [WebAIM Section 508 Checklist](#)

### **How Section 508 applies to PDF Documents as an email attachment**

In its current form, Section 508 does not explicitly mention email as being covered under Section 508. The consensus stance currently is that making email accessible is recommended, but not required by the Section 508 standards. However, it should be noted that the [Section 508 Advisory Committee](#) (Telecommunications and Electronic and Information Technology Advisory Committee, TEITAC) submitted recommendations to the [Access Board](#) in April, 2008 for updates/revisions to Section 508. Included in these recommendations is that the 508 standards explicitly note that the 508 standards apply to emails. Keep in mind though that documents attached to an email (including PDF documents and electronic forms) may still be required to meet Section 508 standards as applicable.

While Section 508 compliance is not required for emails, many Federal agencies have internally adopted Section 508 compliance for all broadcast emails (i.e., emails sent to large groups of people) – internal or external – and their attachments, emails that are sent to recipients who are known to have disabilities, emails that can/or will be forwarded by the recipient to a larger (unknown) audience, or contain graphics, invitations, PDF attachments, and/or links to audio or video content.

These policies also state that emails with non-compliant attachments (such as a graphical flyer or newsletter) can be made 508 compliant in one of two ways. You can either:

1. make the attached document 508 compliant, or
2. include the text of the attached document within the body of the email.

For example a non-compliant document (such as a graphical flyer or newsletter) can be attached to an email as long as all of the pertinent details of the document are reiterated in the body of the email in text format. With that said, if the document is posted to the internet, 508 compliance would be required as applicable.

**Note: Another alternative could be to include the text of the inaccessible attachment in an accessible Word attachment.**

It should also be noted that while email is not specifically mentioned in Section 508 it is unclear at this time whether or not documents (such as PDF documents) attached to an email are covered under Section 508. However, as mentioned earlier in this section, the Section 508 Advisory Committee has submitted recommendations to the Access Board for amendments to Section 508 that explicitly note that Section 508 standards apply to emails.

### **For more guidance on accessible email content and attachments:**

- ⇒ [Access Board Advisory Committee Report on Updated 508 Standards](#)
- ⇒ [Discover the Seven Steps to Accessible Email and Attachments \(Adobe Connect Pro\)](#) – Archive of a 4/232008 [USDA Target Center Web Connect series](#) training on accessible email.
- ⇒ [U.S. Department of Health & Human Services \(HHS\) Accessible Email \(internal\) Policy](#)
  - ⇒ [Additional Guidance related to the HHS internal policy on accessible email](#)
- ⇒ [Access Board Advisory Committee Report on Updated 508 Standards](#)