

■ Making Adobe PDF Files Accessible for Students with Disabilities

Adobe PDF files, or Portable Document Format files, are popular in distance learning because they provide a cross-platform solution for presenting content, including words, images, tables, and forms.

Adobe provides its Acrobat Reader software as a free download (<http://www.adobe.com/products/acrobat/readermain.html>). Because anyone can use this free software, PDF files have become commonplace on the Internet. PDF provides content developers with the assurance that their document will have a consistent look and feel, regardless of the operating system.

■ Creating PDF Files

□ Adobe Acrobat is essentially a plug-in for other word-processing and publishing programs. It integrates well with Microsoft Office 2000 and XP applications. Acrobat does not allow users to create new PDF files within Acrobat. Instead, it simply converts other file formats into PDF. For example, when you install Acrobat, it adds a PDF Maker icon to your Microsoft Word toolbar, thereby allowing you to translate Word files into PDF files.

■ What Makes a PDF File Accessible?

Much of the information presented in a document - text, charts, graphs, images - is meant to be shown in a visual format. Consequently, comprehending the information can present difficulties for individuals with visual impairments. An accessible PDF file exposes visual elements to screen readers. A screen reader is a piece of computer software used by a person with a disability to read electronic content via a synthesized voice.

Previous versions of Acrobat Reader were not able to expose these elements to screen readers. People who used screen readers, therefore, could not access the structure or text of many PDF documents. An accessible PDF file works with a screen reader to present all elements of the file - the text, the images, the structure - to a student with a visual impairment. Creating an accessible PDF file involves "structuring" or "tagging" the document before it goes through the PDF conversion process. This allows Acrobat to present these "structured" and "tagged" elements to a student using a screen reader.

■ Structuring Accessible PDF Documents

An example of a "structured" document is a standard HTML file. HTML files typically have mark-up tags that define the structure of the document. For example, the <H1> tag in HTML defines that text as extremely important, while the <H2> tag is less important, with the <H3> tag being less important than <H2>. Structure is extremely important when using screen readers, because it defines how the document is to be read to a user. People without visual impairments can pick up visual clues to determine the importance of a piece of text by looking at the font size, color, style or location. The screen reader is less interested in how the document looks and more interested in the content and structure of the document.

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One simple way to structure new PDF documents is to format the "source" (original) document using Microsoft Word. Newer versions of Word allow the user to use the Style menu to add headings, titles, and other structural elements in the factsheet. For example, this document is structured using different heading styles. Using the Style menu to format text as a heading or a paragraph makes it easier to convert a Word file to accessible PDF. This is especially true for documents with complex designs such as multi-column layouts.

Additionally, structured documents are much more readable when using the "zoom" feature to enlarge the screen display in Acrobat Reader. Structured documents can "reflow" to fit the width of the available screen. Without structure, none of this would be possible.

A content developer can view the structure of an accessible PDF file within Acrobat. During the conversion process, Acrobat creates a tree hierarchy of the content, showing the relationship between all of the elements in the document and organizing the reading order of the document.

■ Tagged Images in Accessible PDF Documents

Images can be "tagged" with alternative text (similar to alt-tags in HTML) either in the source document or in Acrobat. In Microsoft Word, the procedure for including alternative text tags in a document is as follows:

- 1. Right-click on the image that is inaccessible.
- 2. Select 'Format Picture' from the menu.
- 3. Click the Web tab.
- 4. Type in the text description of the image.
- 5. Click OK.

To add alternative text for images in Acrobat:

- 1. Select the 'View' menu.
- 2. Highlight the 'Navigation Tabs' submenu.
- 3. Select 'Tags' from the menu.
- 3. In the Tags window, locate the image in the tree hierarchy.
 - This should be something like 'Shape'.
 - (Selecting 'Highlight Content' from the Options menu in the Tags window is helpful in identifying the proper image.)
- 4. Right-click on 'Shape' and select Element Properties.
- 5. This should bring up a dialog box allowing you to type in the alternative text.
- 6. Type in the alternative text, then select the OK button.