14 Best Practices to Avoid Section 508 Compliance Pitfalls

Developing a document that needs to be made accessible requires an awareness of how some design elements can affect the tagging process. Fonts, bullets, formatting and issues specific to Microsoft Word can affect the effort necessary to make a document accessible; thereby increasing the cost to remediate that document for Section 508 compliance. One of our goals at Appligent regarding our Section 508 Compliance Services is to provide our clients with the knowledge necessary to create a document which is Section 508 "friendly". By following some simple guidelines, PDF documents can be created that can be made Section 508 compliant in the most time efficient and cost effective manner.

Millions of US citizens are visually impaired and must use assistive technology (AT) to read electronic content. This software, called a screen reader, deciphers online and other electronic content. To meet their needs and to ensure equal access to information, the US Congress enacted legislation in 1998 to require U.S. Federal agencies and contractors to procure accessible software and to produce accessible electronic documents. The regulations, known as Section 508 of the Rehabilitation Act, went into effect in June, 2001.

Section 508 addresses every aspect of electronic documents. This includes ensuring content is tagged in correct order, as well as properly identifying section headings, bulleted and numbered lists, and footnotes and endnotes. Guidelines for the accessibility of PDF are also part of the PDF/UA ISO standard 14289-1.

Characteristics of a fully accessible PDF include establishing a valid reading order for all page content; creating and validating tags for all logical content; providing alternate descriptions for all images; tagging tables to correctly represent table structure; including valid Unicode assignments for all characters; and managing all form-fields, links and other interactive features to ensure their maximum usability.

When you contract with Appligent's team to make your documents Section 508-compliant, we also make them more 'user friendly' by applying optimal structure to tables, making heading tags consistent, and marking footnotes correctly as well as linking them so they read in logical order. Our PDF Accessibility Services Team has put together a list of tips to make PDF files less time consuming to remediate for Section 508 compliance and therefore less costly to our customers.

Please Note: Section 508 remediation is the last step to be performed prior to releasing a document or posting it to a website. The documents should be proofread, converted to PDF, redacted if necessary and then made Section 508 compliant.

Fonts and Bullets

Don't use custom typefaces or stylized bullets: In addition to taking up more space in your document, they can trigger Unicode mapping errors in accessibility checkers.

Use OpenType fonts, or Base 14 fonts (installed as a part of the Adobe Acrobat installation): OpenType and Base 14 fonts add little size to your document and include options such as the Helvetica, Times, and Courier standard font families (regular, italic, bold, bold italic), as well as Symbol, and Dingbats. Base 14 fonts don't need to be fully embedded, which can help significantly reduce file size. Bullets and other special characters should also be chosen from these fonts.

Avoid extra bold, black, or heavy font variations: Such styles can cause text to appear multiple times in the tagged document.

Don't use small caps: Using small caps can cause text to appear as a mix of capitals and lower case characters in tags and cause the screen reader software to repeat content as if stuttering.

Formatting Issues

Avoid double-page spreads: Headers, body text or tables split into two pages are seen and tagged as separate pages by Acrobat. These require time-consuming manual work to make them read properly. Manual reorganization of the tags is required so that the information can be read in the correct order and context.

Use embedded, flattened .jpg files: In files with layered graphics (such as Illustrator drawings) and multiple layers of background shading, tagging can change layer order and 'break' images or cause text to disappear behind shading.

Simplify Tables: Multiple levels of row/column headers are very difficult and labor intensive to tag. Even when structured and tagged perfectly, many screen readers will read them row by row, making them difficult for a non-sighted end-user to decipher.

Limit 'Visual' cues and information: Avoid using graphic elements or color coding to convey essential information. Differently colored or formatted words (such as bold, italic, etc.) need to be separated and tagged individually and supplied with alternate text. This increases tagging time significantly.

Don't forget your ALT text: Alternative text is required for Section 508 compliance. All graphics and relevant visual elements need descriptions that can be read by screen readers.

Formatting Issues Specific to Microsoft Word

Be careful with file extensions: Always save Word documents as .doc, (not .docx) then output as PDF. Tagging a PDF that was created from a .docx file can have unexpected content. Converting to .doc then .pdf cleans up the additional content.

Watch your spacing: Spacing and line breaks should be created by using paragraph settings, not by hitting return. Using "return" creates many empty space tags in the PDF, which will cause screen reader software to keep reading "Blank, Blank…" if they are not removed.

Use consistent formatting: If styles are used, they should have standard names such as Header1 or H1, body text, etc. and be used consistently. Otherwise, if a style is named something like "documentXX_headerFirstLevel" or "documentXX_bodytext", the tags use those titles instead of the standard <H1>, <P>, etc. A screen reader can recognize <List>, <P>, <H> tags and read them accordingly, easily navigating the different elements. In particular, if all headers are marked as H1, H2, etc. a user can choose to scan through the document by navigating from header to header.

Text boxes should be avoided as much as possible: Text boxes with heavy frames and shading will typically be perceived as an image in PDF. Some text boxes may even lose their 'grouping' in the tagging process so that the text will be hidden behind background shading. Also, "sidebar" text boxes can interrupt the flow of body text. When reading a document visually, you can skip over a sidebar but when you are listening to the document being read by a screen reader, the interruption can be annoying or confusing.

Use text, not images of text: Screen readers cannot read images of text. If your PDF files are scanned images, they need to be processed through Optical Character Recognition (OCR) Software. This will convert the images of text to actual text and significantly decrease the overall size of the PDF file.

Taking the time to follow our tips for appropriate fonts and formatting at the outset will save your organization a good deal of time and money. However, if you don't want to worry about that level of detail, we're always here to help you. Our PDF Accessibility Services go beyond basic Section 508 requirements to deliver truly usable and maximally accessible PDF content.

More Information:

Further information on the technical aspects of PDF and Section 508:
http://talkingpdf.org/how-section-508-applies-to-pdf/
http://talkingpdf.org/pdfua-update-software-and-supporting-documentation/

Adobe on Section 508:
http://acrobatusers.com/tutorials/what-are-pdf-tags-and-why-should-i-care
http://www.adobe.com/accessibility/508standards.html

Myths & Facts about Accessible PDF:
http://www.appligent.com/services/pdf-accessibility-services/

US Government Resources for Section 508:
http://www.justice.gov/crt/508/archive/deptofed.html
http://www.section508.gov/Section-508-Of-The-Rehabilitation-Act
http://www.section508.gov
http://www.access-board.gov