What are "Accessible" Documents?

An accessible document is a document created to be as easily readable by visually impaired readers. Making a document accessible is easiest when you are in the original stages of creating a document.

PDF files play a key and growing role in innumerable areas where documents are needed. PDFs are the uncontested "final-form" electronic document format of choice.

In order to understand how to make documents accessible, you first need to understand how documents are "read" by screen reader technology. Screen readers such as JAWS and NVDA are used by blind or visually impaired computer users to navigate and read text on a screen. These tools have become more sophisticated in recent years and when accessing web sites and programs that are properly designed to work with screen readers, blind computer users can fully utilize computers in the same way that sighted users access web content and applications. Just as poorly designed web sites can be difficult to navigate and use with a screen reader, web content such as PDF documents can be a potential accessibility issue if they are not made accessible.

Optimize source document:

The simple goal is to use as much of the accessibility features in your source document as possible so that when you're converting it to a PDF, most of those accessibility attributes are preserved.

For example, instead of changing the font size, font type or color manually to create a "heading", use the predefined Heading style in Word. Instead of drawing a table, use the Table option in Word to create a table. Instead of creating a list by indented asterisks, use the List option to create lists.

Convert to tagged PDF:

Tagged PDF means that resulting PDF will contain tags which serve as a foundation for assistive technologies to know the semantics. In other words, the non-tagged PDF is non-accessible PDF. Tagged PDF usually means that PDF is accessible. Only correctly tagged PDF is accessible PDF.

PDF tags:

The most important part of the PDF accessibility are the tags. With tags, you provide semantics (meaning) so that assistive technology can correctly interpret a specific piece of content (is it an image, a paragraph, or a table?).

If you are familiar with HTML, you'll quickly grasp the PDF tags as they are quite similar (eg. h1 in HTML is H1 in PDF, ul in HTML is LI in PDF, etc.).

Unlike with HTML, all of your tags modification happen within Adobe Acrobat Pro with either Tags panel or via Touch Up Reading Order panel. Tags panel is more code-based (you see actual tags) and more comprehensive, while Touch Up Reading Order is a more visually-based tool.

Essentially, you create/modify/delete tags and then associate them with the content in the PDF. The result is that you have a list of tags, where each tag is tied to specific content (eg. Figure tag to an image with alternative text to describe the image).

Important: tag order is screen reader reading order - meaning screen reader will read the content one after the other based on the ordering in Tags panel.

Besides converting a Word document into PDF, another method for creating a PDF is scanning a paper copy of the document. If you choose to scan, run the Text Recognition (OCR) feature of Adobe Acrobat to make the text accessible to a screen reader and then run the accessibility checker to ensure that the document meets the other accessibility requirements. Without running the Text Recognition function, scanned text is simply an image and therefore not accessible.

Recap Summary:
To make an accessible PDF document, start by creating an accessible document in Microsoft Word and then use "Save As" to convert it to a PDF. By using the built-in features within Word, you can avoid many of the common accessibility mistakes. Content must be properly tagged so that a screen reader can know what kind of information the content represents. Such elements include headers, body text, lists, images, backgrounds, and tables. Using the Styles in Word will also ensure that your document is bookmarked properly. All correctly formatted documents from Word will then be tagged and bookmarked correctly.

 - Note that Adobe Acrobat Pro has a built-in accessibility checker in the Tools section.

Best Practices Related to PDF Documents:
DOs - Use the built-in style headings of your source program to create a visual heading in your document. For example, in MS Word, Styles can be found on the Home tab within the Styles panel. Using Styles will ensure that your document is properly bookmarked and tagged when converted to PDF format.

DON'Ts - Do not manually create a heading by simply bolding or changing the font size or color.
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DOs - Use the built-in list feature of your source program for bulleted and numbered lists. For example, in MS Word, Lists can be found from the Home tab within the Paragraph panel.

DON'Ts - Do not create a list by typing the number at the beginning of every line or typing a hyphen as an example.
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DOs - Use the built-in Table of Contents feature of your source program to build a table of contents in a document. For example, in MS Word, the Table of Contents feature is found on the Reference tab within the Table of Contents panel.

DON'Ts - Do not type a table of contents manually.

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DOs - Finalize your source document by removing all comments and accepting or rejecting track changes (in MS Word) before converting the document to PDF format. Under the Review tab, ensure you are seeing all markup and that none display in the document.

DON'Ts - Do not have comments, annotations, or tracked changes within your final document.

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DOs - Run Optical Character Recognition (OCR) (Text Recognition function) to convert a scanned image of text to readable text.

DON'Ts - Do not leave scanned text in the document.

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DOs - Check the reading order of the document, especially if using columns, to ensure that a screen reader views the content in the proper order.

DON'Ts - Do not use tables for layout functions.

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DOs - Use fonts that are clear and legible (e.g., Arial or Times New Roman), generally in the 10 to 14 point range. The spacing in the document should be enough to show paragraph breaks clearly. Spacing between lines should be at least 120% of the font size. This is the default in Word.

DON'Ts - Do not use fancy fonts that are more decorative than functional. This is especially important in headings.

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DOs - Create hyperlinks using descriptive words for the hyperlink. Hyperlinks can be inserted from the Insert tab and then Hyperlink on the Links panel. Always double check that your hyperlinks work.

DON'Ts - Do not use "Click here" or "More" as hyperlinks.

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DOs - Insert Alternative Text (ALT text) and captions for informational images and tables. For Images, right click on the image and choose Insert Caption. Right click on the image and choose

Format Picture, and then click the third icon over and click on ALT TEXT. For tables, right click on the table and choose Table Properties. The 5th tab is for ALT Text.

DON'Ts - Do not provide ALT text or captions for non-informational or simply decorative images. When you run the accessibility checker, this error should be ignored. The checker can only identify that the image does not have a tag. It does not know that it is a non-informational image.
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DOs - If you have multiple images or objects that are layered over one another, combine them into one image.

DON'Ts - Do not overlay or group several objects next to one another so they appear as one object.
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DOs - When using color to convey meaning, add a non-color method as well, such as text as shown in the visual example column.

DON'Ts - Do not use color alone to convey meaning.
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DOs - Use a strong color contrast between text and backgrounds. Black and white is always a good choice. This is not usually checked via Microsoft applications. It requires a visual check.

DON'Ts - Do not use white text on a light gray background. Do not use red and green text and highlighting together. Do not use red text on a black background.
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DOs - Always run the accessibility checker when you are finished with your document to see if any issues are identified, then remediate those items prior to publishing your document. Select View > Tools > Accessibility. From the menu that appears on the right side of your document, select the Full Check panel under the Accessibility section. When the pop-up window appears, click Start Checking. Your results will appear on the left side of your document.

DON'Ts - Don't assume that your document is good; always run the checker to confirm.