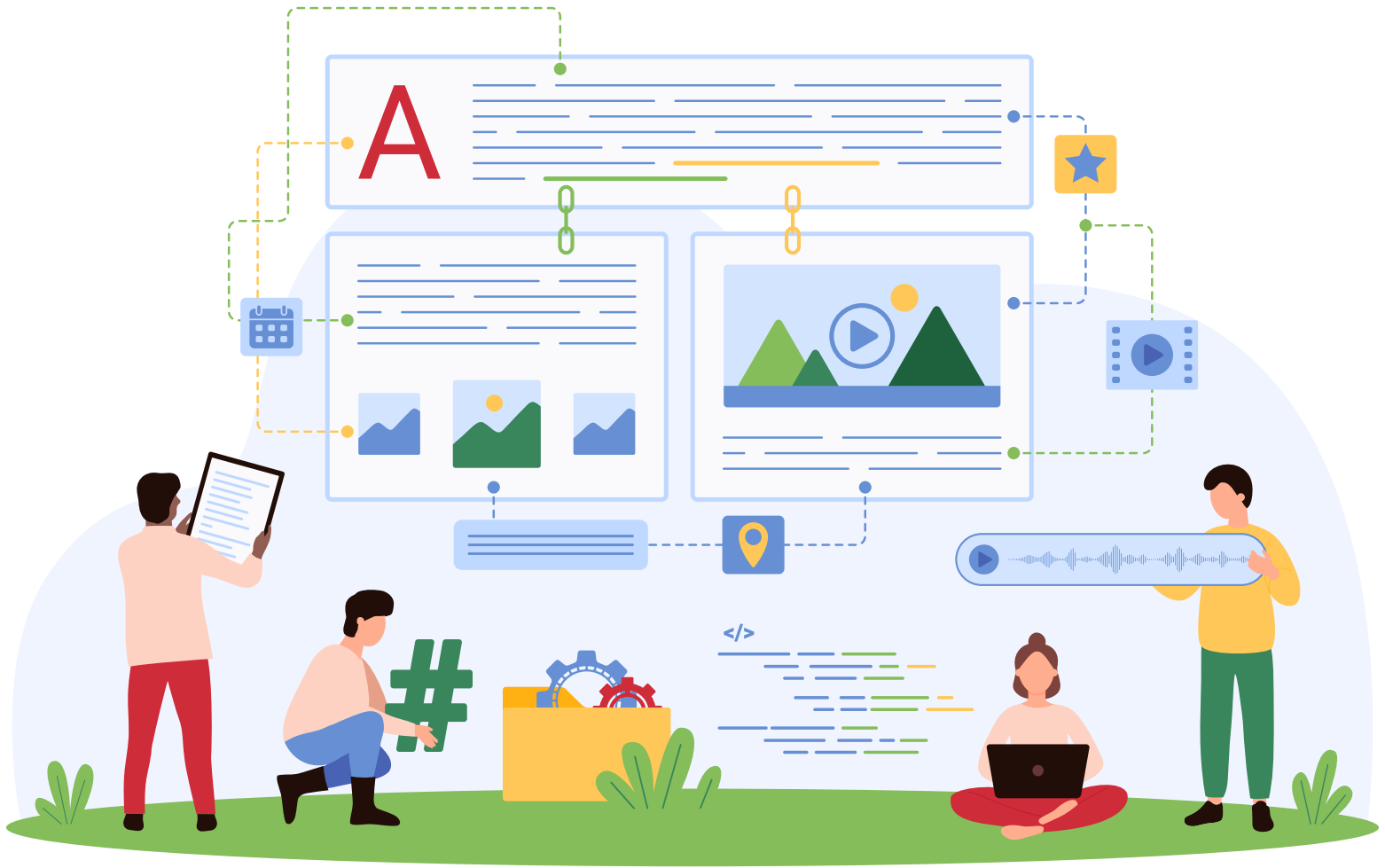


WVATS

West Virginia Accessible Technology System



How to:

Accessible Documents



West Virginia University®

CENTER FOR EXCELLENCE IN DISABILITIES

WEST VIRGINIA ASSISTIVE TECHNOLOGY SYSTEM

Introduction

Section 508 of the Rehabilitation Act requires Federal agencies to make electronic and information technology accessible to users with disabilities, including but not limited to:

- Blindness, color blindness, visual impairment
- Deafness, hearing impairment
- Speech impairment
- Mobility, strength, dexterity or reach impairment

The following sections will detail how to make documents accessible in Microsoft Word, Microsoft PowerPoint and Adobe portable document format (PDF). Before making a document in those formats, it is important to understand what makes a document accessible. Accessibility ensures that all individuals, regardless of ability, can participate fully. Be mindful of the audience and know that some members may not be able to see, hear, move or speak well or at all, and they may not be able to understand the information being presented.



Alternative Text

Alternative text or alternative tags are an attribute attached to an image describing the nature or content of an image. Creating these descriptions is important as it allows users with screen readers to understand what the image's content or function is without having to be able to see it. All images must have alt text for a document to be accessible. This includes pictures, illustrations, images of text, shapes, charts, SmartArt and embedded objects. Each document type has a different way to create alternative text for images and will be described in their individual sections.

Tips for alt text descriptions in all formats:

- Think about what in the image is relevant to the message
- Keep the description concise
- Do not describe every detail unless it is vital to the message being delivered

Best practices for alt text:

- Accurate and equivalent: present the same content or function as the image
- Succinct: use as few words as possible; rarely more than a short sentence or two may be appropriate
- Do not be redundant: do not provide information that is in the surrounding text

Microsoft Word

Heading usage in Word documents is key to allowing flexibility with a screen reader and allowing a user to know what is in the document before they begin to read it. This provides users of screen readers and other assistive technology (AT) with the structure to navigate by:

- Viewing a list of all the headings on the page
- Choosing top-level heading, next-level heading, etc.
- Reading or jumping by headings

Structure the page with headings in the following format:

- Heading 1 – Page title or main content heading
- Heading 2 – Major section heading
- Heading 3 – Subsection of heading 2
- Section 4 - Subsection of heading 3, and so on ending with heading 6
- Best practice is to not skip heading levels

Some users will change the font style to alert a change in structure rather than using headings. While this practice creates a visual structure for some users, there is no structure to navigate using this method for AT users.



Headings and table of contents

When using Microsoft Word, headings will create a consistent table of contents for longer documents. To properly create this table of contents:

- Select the “References” tab on the tool bar
- Select table of contents – the first button on the menu
- This will allow readers to easily skip to sections of the document



Data tables

Data tables are a useful tool when displaying information in a Word document. It is important to not create tables “by hand” using the tab key because they will not be recognized as official tables. To create a table, select the “Insert” tab on the tool bar and select “Table” on the menu. Be sure to identify the first row of a table as a reader row. To add alternative (alt) text on a data table:

- Left click on the table
- Select “Table Properties”
- Select the alt text tab on the pop-up menu
- Fill in the title and description box as appropriate, considering the tips in this guide’s alt text section

For alt text on a Mac

- Right-click anywhere on an image
- Choose “edit alt text”
- Enter description

Alt text can be created for pictures, illustrations, images of text, shapes, charts, SmartArt and embedded objects in a similar fashion by simply left-clicking on the item and selecting “alt text” to create a description.

Hyperlinks

When using a hyperlink, it is important to use descriptive text within the link that does not rely on context from the surrounding text to let a person know the link’s purpose. Keep the amount of text within the link to a minimum. Avoid ambiguous link text such as “click here”, as this does not provide any information about where the link will lead the user. To turn the entire link into a more user-friendly link name, follow the steps below:

- Left click the hyperlink
- Select “Edit Hyperlink” in the pop-up menu
- Type the desired text into the “Text to Display” bar located at the top of the pop-up menu
- Click “OK” and the new text will display in the same format as the previous hyperlink



Lists and columns

When lists or multiple columns will be present in a document, make sure to use the features provided by Microsoft. Manually creating lists and columns using the tab key can provide visual structure but does not provide the structure needed for AT users to navigate the page. To create columns, select the “Columns” button on the “Layout” tab of the top ribbon and input the number of columns and decide where in the document to place them. To create lists, select bullet points or numbers using the buttons in the “Paragraph” section on the “Home” tab of the top ribbon.

Accessibility checker

Utilizing the built-in accessibility checker in Microsoft Word is the simplest way to determine if the document will be AT friendly:

- Select “File” in the toolbar
- Select “Info” on the pop-up sidebar
- Select “Check for Issues”
- Select “Check Accessibility” in the dropdown menu

The accessibility checker will pop up on the side and display the inspection results. The results will display various items, including:

- Errors: Content that makes a document exceedingly difficult or impossible for people with disabilities to access
- Warnings: Content that in most-but-not-all cases make the document difficult for people with disabilities to access
- Tips: Content that people with disabilities can access but could be better organized or presented

An example of a warning is “repeated blank characters”, which means somewhere in the document there are repeated spaces that will be read on screen-readers as “space, space, space, space” for each space present. The simple solution for this is to delete all these spaces and properly format the sections with the tab key or use the enter key to start a new line. Similar to blank characters, blank rows in a table will show up as a warning and can be fixed by adding text to the blank rows or deleting the unnecessary rows in the table.

Another warning is “hard-to-read text contrast”, which can be fixed by changing the text or background color to a greater contrast such as navy-blue text against a gold background. “Unclear hyperlink text” is another warning that may show up in the

It may be necessary to convert a Word document into a PDF. To make sure that the document will remain accessible, follow these steps:

- Select “File” from the top ribbon
- Select “Export” from the dropdown menu
- Select the “Create PDF/XPS” button
- Select the “Options” button
- Make sure “document structure tags for accessibility” is check marked under the “Include non-printing information” section on the pop-up menu



checker. This should be examined to see if the hyperlink itself has enough information to let the user know what type of link they are following and what type of information they will receive on the next page. The final warning that shows up in the inspection is “merged or unmerged cells”. The checker will say that important cells should not be merged or that some cells should be merged. It is up to the document creator to determine if that makes sense for the data in the table.

Tips from the accessibility checker can include checking the reading order to provide more clarity, changing duplicate titles that may be present, or adding a placeholder when a heading level is skipped. Tips are the most optional suggestions present in the accessibility checker but may allow the document writer to get their point across in a more efficient way.

Microsoft PowerPoint



PowerPoint presentations are primarily visual presentations. When creating a PowerPoint, it is important to be mindful of font size, font type and color contrast.

The font size used in the presentation must be large enough to be read from a distance and by those with visual impairments. 28 pt font may be large enough for some audiences but 36 pt or 44 pt are the best sizes to use.

As for font type, the usage of “fancy” cursive or loopy fonts may look nice to the eye of the creator but can be very unclear to those with any visual impairment. Use the basic fonts with clear spacing such as Arial, Calibri, Georgia, Tahoma, or Verdana to ensure the best legibility.

Color contrast is very important. High contrast between text and background helps those with vision challenges and grabs the attention of the audience more efficiently than low contrast. Remember that it is okay to maintain the same color scheme through the presentation and while creativity is good, the audience understanding the information is the primary goal.

Follow these steps to create alt text in PowerPoint:

- Right click on the image
- Select “Format Picture” from the dropdown menu
- Select the “Size and Properties” icon
- Select “Alt text”
- Enter the description of the Image

Reading Order

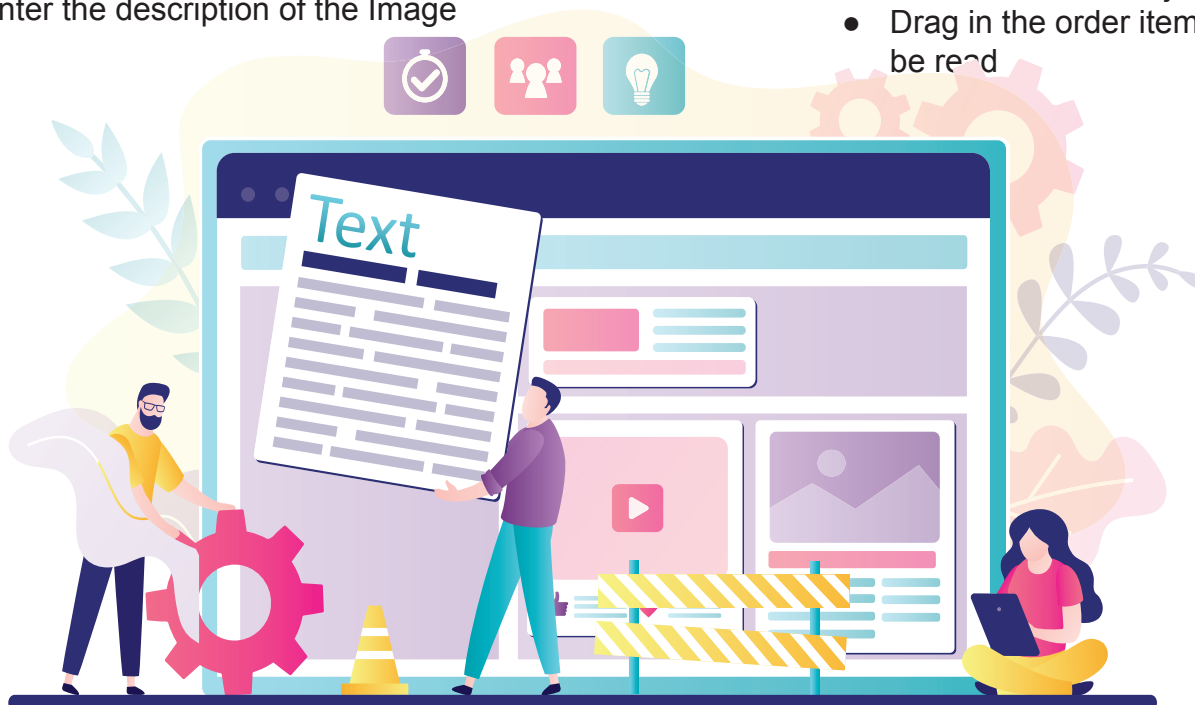
Reading order is another feature offered in PowerPoint that must be edited to ensure clarity. Items on the screen will be read by a screen reader in the order you specify. If this is incorrect, the screen reader may read content before headings and create confusion.

Editing reading order for Windows:

- Select the “Home” tab on the toolbar
- In “Drawing” tools, select “Arrange”
- From the dropdown menu, select “Selection Pane”
- Arrange items in the order they should be read with the first item at the bottom and the last item at the top

Editing reading order for Mac:

- Go to “Home”
- Select “Arrange”
- Select “Reorder Objects”
- Drag in the order items should be read



Adobe PDF

A PDF is meant to keep the format of the original document. They can be edited, but it is much more difficult than editing a regular Word document. PDFs are not typically accessible because they can be saved as an image, the color contrast, font type or font size are incorrect, or the PDF tags are incorrect.

As previously mentioned, font size, font type and color contrast are very important to be mindful of in the creation of any document. The font used in the document must be large enough to be read from a distance and for those with visual impairments. A minimum of 12-point font should be used, but it is acceptable to use larger font.

As for font type, the usage of “fancy” cursive or loopy fonts may look nice to the eye of the creator but can be very unclear to those with any visual impairment. Use the basic fonts with clear spacing such as Arial, Calibri, Georgia, Tahoma, or Verdana to ensure the best legibility.

Color contrast is very important. High contrast between text and background helps those with vision challenges and grabs the attention of the audience more effectively than low contrast.

Using the Accessibility Tool in Adobe PDF

There are many options on the Adobe tool bar for fixing a document. That said, not every document will use every tool. Using the Acrobat Accessibility Tab performs a full check on the document and generates an accessibility report. There are additional options within the accessibility checker that allow the report to be attached to the document and allows for specific options, such as appropriate color contrast, to be selected or unselected based on what the user is checking for. It is recommended to run a full report to make sure the document is as accessible as possible. It is also an option to check page-by-page for longer documents. Terminology on the accessibility checker is as follows:

- Passed: this item is accessible
- Skipped by user: rule was not checked because it was not selected in the Accessibility Checker Options dialog box
- Needs Manual Check: the Full Check feature could not check the item automatically. Verify the item manually
- Failed: the item did not pass the accessibility check

Tags in a PDF

Tags are used with Adobe PDFs to convey alt text. Use PDF tags to provide hidden, back-end structure, like a heading system in Microsoft. Make sure that all tags are assigned properly and delete any empty tags. Follow these steps to create both kinds of tags:

- Select “Accessibility”
- Select “Add Tags to Document”
- Select “Touch-up Properties” to change the tag type and edit attribute classes and object

Reading order

Reading order is the order that items on the screen are read by a screen reader. To ensure that these items are read correctly in a PDF:

- Select “Reading Order” under the “Accessibility” tab on the toolbar
- Click “Show Order Panel”
- Arrange items in the order they should be read
- Items can be tagged and assigned a reading order from this menu

Set-up assistant

Set-up assistant is an additional tool offered by Adobe that can aid in fixing the entire document. While it can be helpful, it should not be relied on to completely fix the document. Set-up assistant allows Adobe to change the color contrast and allows blank pages to be skipped by screen readers.

Trainings

WVATS conducts trainings for groups on accessible documents of all types with step-by-step instructions, examples and opportunities to try it out while the team is with you before you make accessible documents on your own.

Contact us by phone at **304-293-4692** or **1-800-841-8436** or by email at **wvats@hsc.wvu.edu**

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