



ACS  
LEARNING

## Your Guide to Digital Content Accessibility

### *Job Aids*

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#### Disclaimer

Even with accessibility in place, there can still be accessibility gaps. You should not consider completing the procedures in this guide as 100% protection against any potential gaps and related outcomes.

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## Section 1: About this Guide

This guide is part of a learning curriculum designed to raise awareness about the importance of digital content accessibility and to share best practices for developing accessible task-based job aids. It is intended for content developers who create content using Microsoft® Word and Adobe® Acrobat®.

By applying the best practices in this guide, you can make strides toward creating accessible digital content. For information about how to use Microsoft Word, check out the many resources Microsoft offers. For information about how to use Adobe Acrobat, check out the many resources Adobe offers.

You can also visit [www.acslearning.com](http://www.acslearning.com) where you can schedule a free consultation to discuss your organization's learning needs and objectives. Our free learning library is where you can watch learning videos to help with job aid development. As your learning solutions partner, our goal is that everyone has an equal opportunity to learn and grow.

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## Section 2: The Importance of Accessibility

Research shows that about 20% of the population uses assistive technologies. In the United States, that means that over 65 million people use screen magnifiers, screen reading software, text-to-speech systems, or other high- and low-tech tools to access and interact with digital content. But what good are assistive technologies if the content is not accessible?

In this section, you can learn about:

- Digital content accessibility
- Screen readers
- Accessibility tools in Microsoft Word
- Accessibility tools in Adobe Acrobat
- Adobe Acrobat interface variations

### Digital Content Accessibility

Accessibility enables people with disabilities to use information, products, and public spaces in the same way people without disabilities use them. Digital content accessibility enables people with no or low vision to consume and interact with digital content using assistive technologies like screen readers, touch screens, braille keyboards, and similar tools.

Accessibility in documents focuses on creating hierarchical and meaningful information that is consistent and concise. Organizing information in this manner allows users to control whether to access the information and how to access it. Effective information planning and design is inherent in creating accessible documents, which benefits everyone, not just those who require assistive technologies.

The organization that defines Web Content Accessibility Guidelines (WCAG) for anything accessed on the Internet is the World Wide Web Consortium (W3C). Consider the following sources to learn more about the WCAG guidelines and how they align with the legal rights for individuals with disabilities:

- [WCAG guidelines](#)
- [World Wide Web Consortium \(W3C\)](#)
- [Americans with Disabilities Act \(ADA\)](#)

In addition to these websites, there are free and for-purchase tools that assist with defining and building accessibility into documents accessed online.

## Screen Readers

A screen reader is a type of assistive technology that reads digital content out loud by referencing hidden tags. The best way to verify accessibility for your digital content is to test your documents using a screen reader. If the information is not structured properly or a tag is out of place, the content will be read out loud in the incorrect order.

Screen readers have different features and functionality, and many can be downloaded for no charge. When determining which screen reader to use, make sure that it is compatible with your computer's operating system and that it supports the applications in your developer toolkit.

Listed in alphabetical order, here is a list of popular screen readers to consider:

1. [Apple VoiceOver](#) - Free
2. [BRLTTY](#) - Free
3. [CDesk Compass](#)
4. [Cobra](#)
5. [Dolphin Screen Reader](#)
6. [JAWS \(Job Access with Speech\)](#)
7. [\(NVDA\) Non-visual Desktop Access](#) - Free
8. [Orca](#) - Free
9. [WebAnywhere](#) - Free
10. [ZoomText](#)

## Accessibility Tools in MS Word

In the spring of 1997, Microsoft released Microsoft Active Accessibility (MSAA). This program was designed to help assistive technologies gain access to the operating system and applications. Over the years, more and more tools have been added to assist content developers using Microsoft applications with creating accessible digital content<sup>1</sup>.

To learn more about accessibility tools in Microsoft Word, visit the Microsoft support site at [support.microsoft.com](https://support.microsoft.com) and search "accessibility, Word" for a list of related articles. You can also subscribe to a free electronic newsletter called AbleNews by sending an email message to [listserv@announce.microsoft.com](mailto:listserv@announce.microsoft.com) and write "subscribe ablenews" in the body of the message.

## Accessibility Tools in Adobe Acrobat

In June 1993, Adobe formally launched Acrobat and the Portable Document Format (PDF) for viewing and sharing documents with page content represented as an image. It wasn't until the year 2000 that Adobe introduced features that enabled an underlying logical structure to exist for a PDF document, and in 2001 the "Tagged PDF" was introduced to support users of assistive technologies<sup>2</sup>.

To learn more about accessibility tools in Adobe Acrobat, visit the Adobe support site at [helpx.adobe.com](https://helpx.adobe.com) and search "accessibility, Acrobat" for a list of related articles.

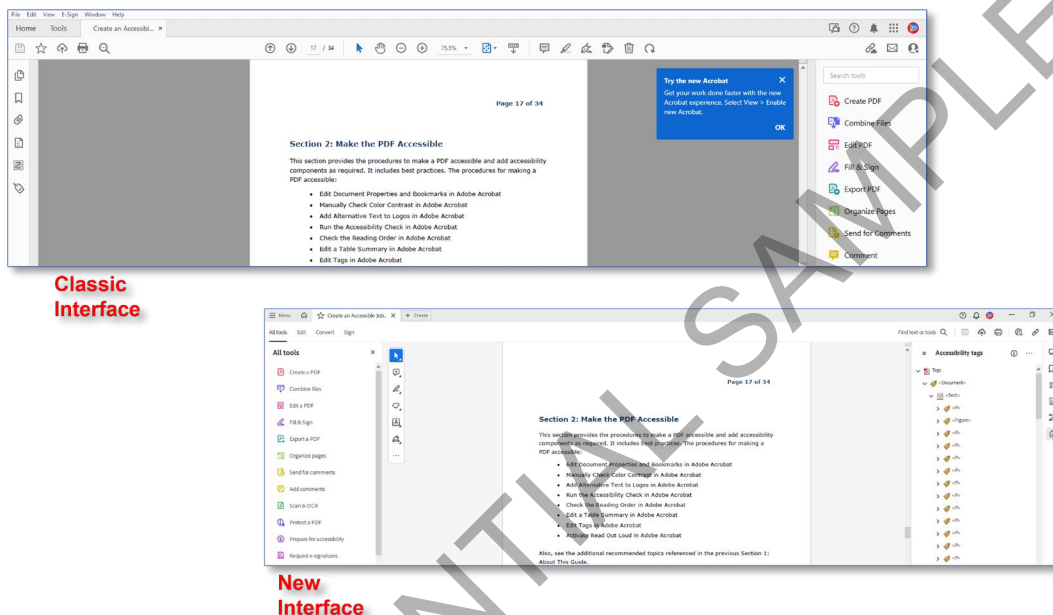
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<sup>1</sup> [A Brief History of Microsoft and Accessibility](https://www.afb.org), <https://www.afb.org>

<sup>2</sup> [Evolution of the Digital Document: Celebrating Adobe Acrobat's 25th Anniversary](https://blog.adobe.com), <https://blog.adobe.com>, Bryan Lamkin, 06-14-2018

## Adobe Acrobat Interface Variations

With the July 2022 release, Adobe initiated a phased rollout of a new, modern user interface for Acrobat and Reader.<sup>3</sup> In the following image, you can see how the UI looks different for content developers.



Notice that on the classic interface, program tools appear on the right panel and on the modern interface, program tools appear on the left panel. Consequently, accessibility tools may appear differently for different Acrobat users.

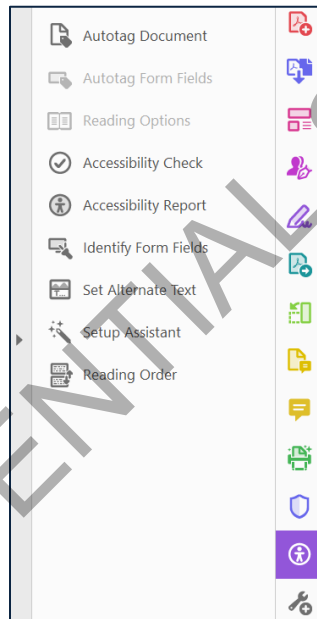
Whether you have the option to switch between the old and new UI depends on your release version and which Document Cloud Product Track you have (Continuous or Classic). For this document, we included the navigation for both the classic and modern interfaces where there is a difference.

<sup>3</sup>[New and Change Preference for Release](https://adobe.com/devnet-docs/acrobatetk/tools/preferences_by_version), adobe.com/devnet-docs/acrobatetk/tools/preferences\_by\_version, 07-12\_2022 (July 2022 updates)

## How to Access Accessibility Tools in the Acrobat Classic Interface

If you have the Adobe classic interface and this is the first time you are working with accessibility tools in Acrobat, you must add the accessibility tools button to the tools panel. If you have the modern interface, accessibility tools are already on the tools panel.

As shown in the following image, the accessibility tools button in the Acrobat classic interface is a purple button with white text and a person icon.



Once you add the button to the tools panel, you can access accessibility tools like the accessibility checker, the accessibility report, and the reading order tool to fix basic tagging problems.

### To add the accessibility tools button to the tools panel

1. Open Adobe Acrobat.
2. On the tools panel, click **More Tools**.
3. In the *Protect & Standardize* section, under **Accessibility**, click **Add**.



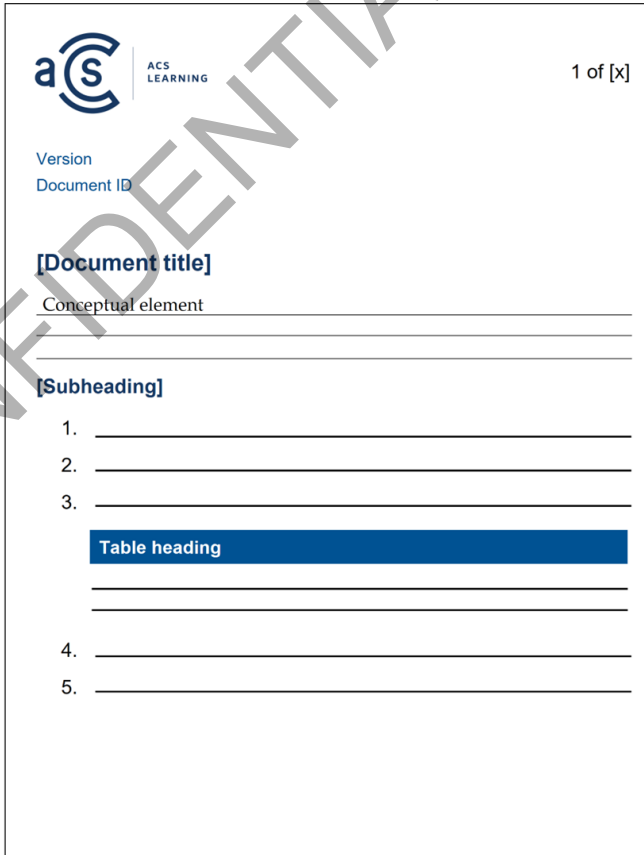
## Section 3: Best Practices for Accessible Documents

Accessibility is an important consideration for learners experiencing content digitally. In this section, you can learn techniques for developing task-based job aids using Microsoft Word, including:

- Tips for using wireframes to structure information
- Tips for using styles to auto-generate tags and streamline formatting
- Tips for setting up Microsoft Word documents for accessibility

### Tips for Using Wireframes

A wireframe is an illustration that represents the skeletal framework of a document. The following image illustrates an example wireframe for a task-based job aid.



The wireframe illustrates the skeletal framework of a document page. It includes the following elements:

- ACS LEARNING logo and page number "1 of [x]" in the top right corner.
- Placeholder text for "Version" and "Document ID" in the top left.
- A bolded placeholder for "[Document title]".
- A section labeled "Conceptual element" with a horizontal line below it.
- A section labeled "[Subheading]" with a horizontal line below it.
- A numbered list with three items, each followed by a horizontal line.
- A section labeled "Table heading" with a blue background and a horizontal line below it.
- A numbered list with two items, each followed by a horizontal line.

For task-based job aids, our wireframe includes specific information types placed in a particular order as follows:

- At the very top, we included a header with just our logo and a reference to the current page number.
- Under the header, we included a reference to the version of the product being documented and a unique ID for our job so that our content development team can track and manage the file in our library.
- Next, we included the document title which our content developers will also add to the document properties.
- After the document title, we included an area for conceptual information that provides context about the task we are documenting.
- A subheading will transition the reader from conceptual information to step-by-step instructions.
- If additional context is needed for a particular step, the wireframe illustrates how to handle a note that follows the step.

In an environment where there are multiple content developers who are writing the same types of documents, wireframes are a tool to help generate a library of materials that read and look alike. Wireframes also help individual content developers maintain consistency and continuity when creating multiple documents over time. Whether you are developing task-based job aids, learning exercises, or other types of learning deliverables, having a wireframe for each type of deliverable is a best practice for scoping and controlling the quality of deliverables you develop.

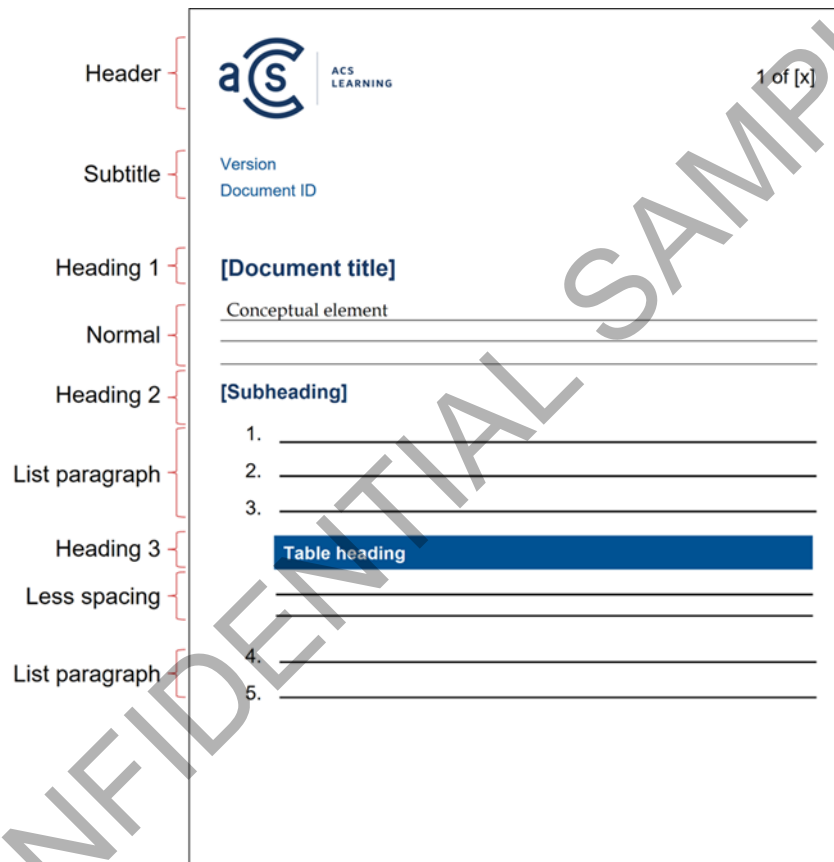
## **Tips for Using Styles**

A style is a combination of formatting characteristics that content developers can select to quickly change the appearance of text or object. Styles play an important role in accessibility. When converting a Word document to PDF, Acrobat converts styles to tags which are required by assistive technologies to read text out loud.

Content developers who want to create accessible digital content should use styles to apply formatting to the text throughout all documents. You can use pre-built

styles, modified styles, or custom styles and edit the styles to apply any formatting you choose.

We found that with just eight styles, you can apply consistent formatting for information types that a task-based job aid might include, as illustrated in the wireframe below.



The following table provides a list and description of each style represented.

| Style Name     | Recommended Usage   |
|----------------|---|
| Header         | We use the Header style for the page number and running section or chapter name.  |
| Heading 1      | We use the Heading 1 style for document titles.   |
| Heading 2      | We use the Heading 2 style for subheadings throughout the document.   |
| Heading 3      | We use the Heading 3 style for table headings.  |
| List Paragraph | We use the List Paragraph style for numbered steps and bulleted items.  |
| Less Spacing   | We use the Less Spacing style for notes and warnings between steps. This formatting has reduced spacing between paragraphs. |
| Normal         | We use the Normal style for body text in the conceptual element and text inside table cells.                                |
| Subtitle       | We use the Subtitle style for a program version and deliverable ID, as required.  |

Additional styles to consider adding for accessibility in your document are image and table captions and additional headings styles, if necessary.

## Tips for Setting Up Microsoft Word Documents for Accessibility

Digital content accessibility starts with how you set up your files in the authoring tool. Here are a few tips to help set up Microsoft Word documents that are optimized for accessibility.

## Language Settings

Since screen readers can read different languages, be sure to set the proofing language in your document. Make sure Microsoft Word is configured to detect the language that you are typing and automatically enable the proofing tools for that language.

## Colors

Use color combinations that have substantial contrast. Learners who are visually impaired or who are deficient in color vision need to be able to distinguish between layered content. There should be sufficient contrast between the background of the page and components on the page such as text, tables, and notes against the background. Be sure to check the contrast of any color used in table headings. Also, check the colors of buttons, icons, and images on the page. While some visual elements may come from screenshots, you may be able to adjust the colors to allow for more contrast.

The minimum contrast ratio for background to text is 3:1, or 4.5:1 for text that is smaller than 12 points. The recommended ratio is 7:1. As a contrast benchmark, the ratio for a white background with black text is 21:1, so most standard documents are compliant with the contrast guidelines. You can use a third-party tool, such as WebAIM or the Colorzilla plugin to verify the color contrast in your document.

## Headers and Footers

Since screen readers can skip information, be thoughtful about the type of repeated content used in headers and footers. Consider just using a logo and page number reference in the header.

## Styles

Leverage pre-built Microsoft styles to apply consistent formatting to text. Avoid combining formats such as **bold** and *italic* in a single style. Use fonts that make a clear distinction between similar-looking characters (such as lower-case L and capital I). Recommended fonts include Cambria, Garamond, Tahoma, and Verdana.

Since screen readers can navigate a page using its headings, listen to a list of all headings, and skip to specific headings learners want to hear, use a style for every heading. When you convert your document to a PDF file, Acrobat converts styles to tags.

### **Table Structures**

Use simple table structures. Do not use nested tables. Do not merge or split cells within a table. If you can tab through a table cell-by-cell and row-by-row, a screen reader should have no trouble reading the information.

Screen readers reference header cells in tables. For each table in your document, select a header option for the table style and designate a header row in the table properties so the row repeats if the table extends across multiple pages.

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## Section 4: Considerations for Writing Job Aids

To accommodate learners who use assistive technologies to access and interact with digital content, content developers should consider techniques to make their writing more accessible. In this section, you can learn:

- Tips for writing a task-based job aid
- How to add alternative text to an image in Microsoft Word
- How to designate a header for a table in Microsoft Word
- How to add alternative text to a table in Microsoft Word

### Tips for Writing a Task-based Job Aid

Writing for digital content accessibility requires content developers to think like the end user. Here are a few tips to help write a task-based job aid in Microsoft Word:

#### Document titles

Your document should have a unique title that describes the function or purpose. The title can be spoken by screen readers and displayed as tool tips for learners using screen magnifiers. Consider adding the title as a heading and in the document properties.

#### Headings

Headings help learners quickly find what they are looking for within a document. Learners can listen to a list of all headings and skip to only the headings they want to hear. For a task-based job aid, consider adding a heading for the document title and a heading that transitions the content from conceptual information to step-by-step instructions.

#### Conceptual Information

Conceptual information helps put information into context. Concepts also help learners remember what is taught and apply information to their specific needs.