



Basics of Remediating an Inaccessible PDF

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Agenda

- Basics of PDF and Acrobat
- Source Document and Conversion
- PDF Remediation Basics
 - Changing Tags - Headings
 - Creating New Tags - Lists
 - Fixing Tables
 - Creating Artifacts
 - Adding Alt Text to Images

An abstract graphic in the top half of the image features three white circles connected by thin white lines. The lines are curved and flow from the left towards the right, with one line passing through the first two circles and another passing through the third. The background is a solid dark blue.

Basics of PDF and Acrobat

Let's Talk About PDF/UA – ISO 14289-1

ISO 14289-1 is a subset of and references ISO 32000

- Subset of ISO 32000 for accessibility.
- Provides the text, structure, and organization of the content to assistive technologies.
- Tag Tree (Structure Tree) must be in the logical reading order.
- Shall vs. May
For example: Lists – Individual list items **shall** be specified by tags. <Lbl> and <LBody> tags **may** be included.
- Organizations may define their own specific rules

Reading an Accessible PDF

Variables

- Quality of the tagging of the PDF document (how accessible is the document)
- Assistive Technology (e.g. Screen Reader) support for PDF tags
- PDF “Reader” support for PDF tags
- Untagged document (reading order inferred)

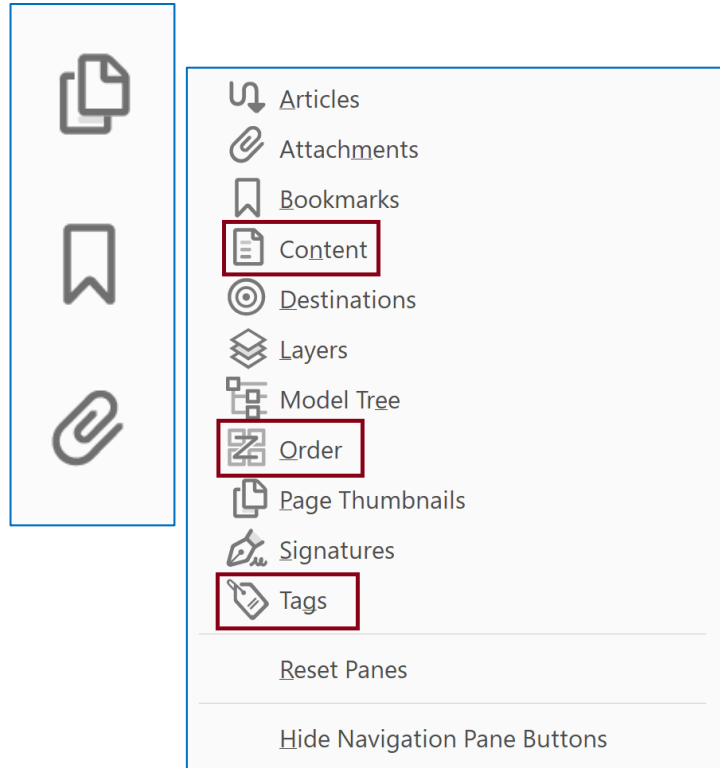
Best results by using:

1. PDF/UA tagged document
2. NVDA screen reader from NV Access (free screen reader)
<https://www.nvaccess.org/download/>
3. Acrobat Reader (desktop)

Acrobat Accessibility Setup – Navigation Pane

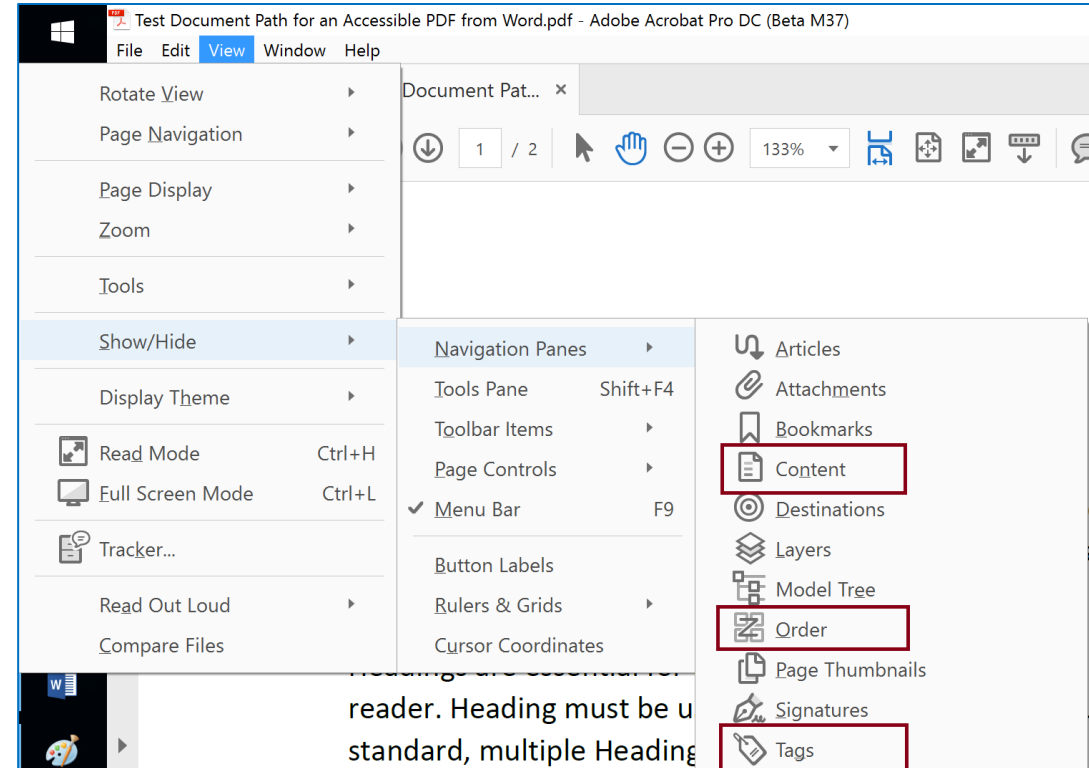
Short Approach

- Right Click on Navigation Pane
- Select: Tags, Content, and Order

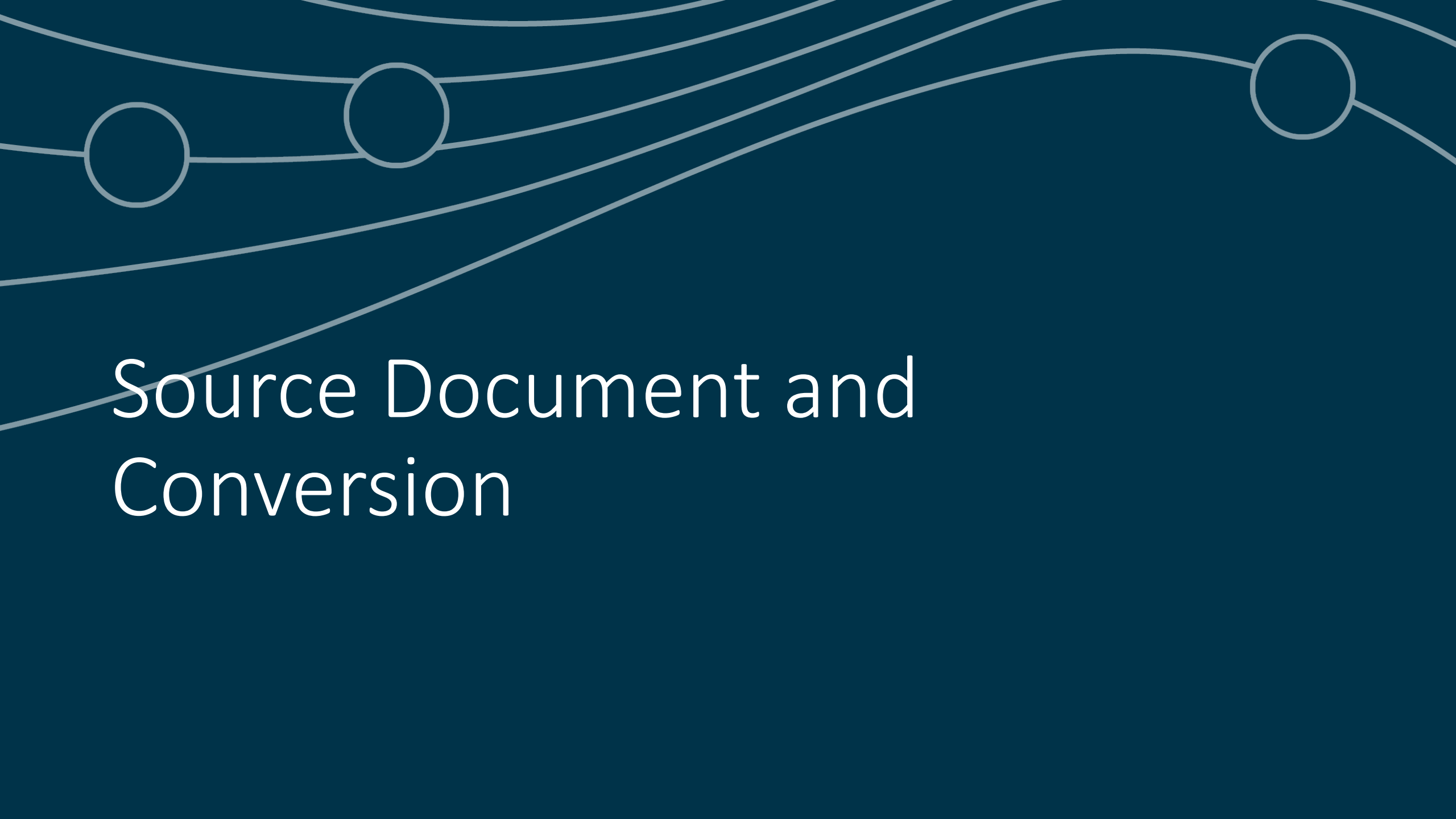


Long Approach

- Go to: View > Show/Hide > Navigation Panes
- Add: Tags, Content, and Order



reader. Heading must be u
standard, multiple Heading

An abstract graphic in the top left corner of the slide. It features three white circles of equal size. Two circles are connected by a horizontal line, and a third circle is positioned further to the right, connected to the second circle by a diagonal line. Several long, thin, white curved lines sweep across the top of the slide, creating a sense of movement and depth.

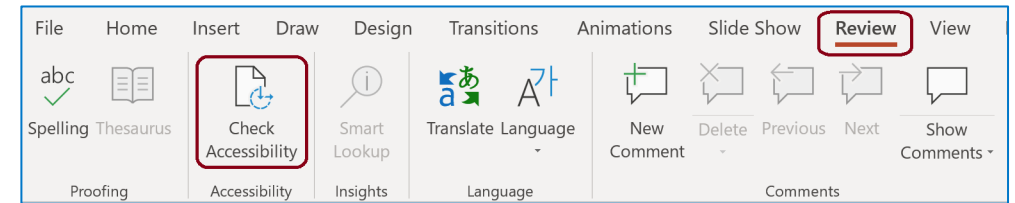
Source Document and Conversion

Source Document

The Source Document is Supreme

Things to consider when creating the source document:

- Does the authoring tool support creating an accessible document.
 - For Example: The author can use Word styles and Accessibility Checker.
- Does the author know how to create an accessible document
 - For Example: In Word, are Styles used to apply Headings or are headings “created” by changing the font size and making the font bold?
- It is almost always easier to fix the source document then the PDF document.



Converting to a PDF from a Source Document

Multiple Methods

- Acrobat Plug-in
- Application Save As
- Export
- Print to PDF
- Other conversion tools or plug-ins

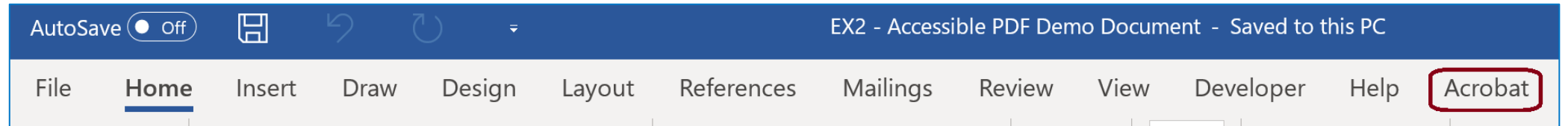
Varying Results

- Tables and Lists may be inaccurately tagged
- Resulting PDF may be untagged
- Custom tags may be created

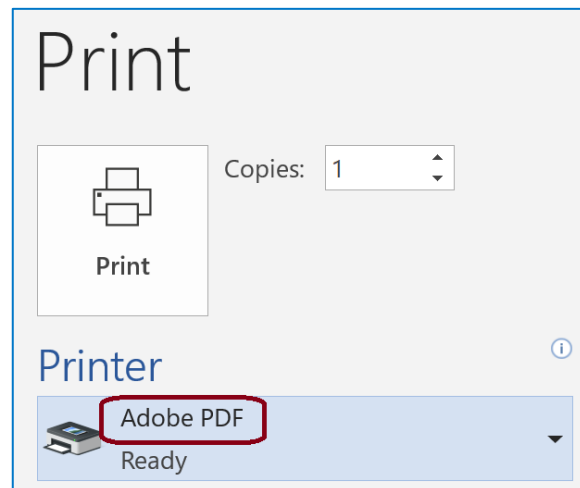
Word to PDF Conversion – Adobe Process

Use Word document [EX2 - Accessible PDF Demo Document](#)

Acrobat Plug-in (Office Ribbon)

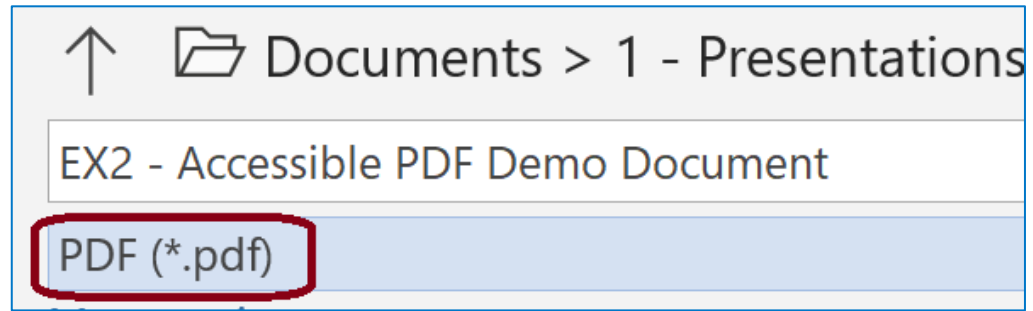


Print to PDF



Word to PDF Conversion– Microsoft Process

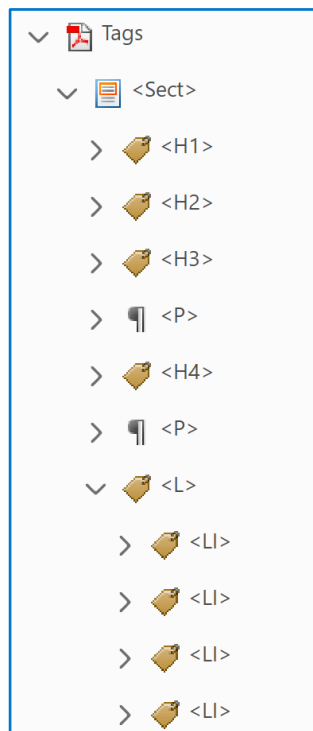
Office Save As



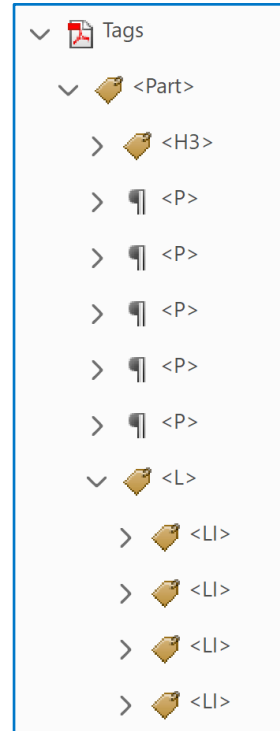
PDF Maker vs. Make Accessible

- PDF Maker (Office Plugin) uses the semantic information of Word to tag the PDF
- MakeAccessible (Acrobat Autotagging) implies the structure of the document

PDF Maker



Make Accessible



Acrobat Pro DC PDF Accessibility – The Basics Converting to PDF for an Accessible Word Document

Text

Lists

A correctly formatted list makes it easier for a screen reader user to understand the context within which the list is presented. Both bulleted and numbered lists, when created using the appropriate method in Word, will convert cleanly to well-tagged lists in a PDF.

Bulleted List

Bulleted lists are used commonly to delineate a list of information that may be too long or too detailed to present in sentence format. Type of bulleted lists include:

- A list of non-prioritized items.
- A list of resources which may be links (e.g. [Adobe Corporate Accessibility](#) page)
- A subset of detailed information that fleshes out a higher level comment or outline item.
- Other information that doesn't need the hierarchy provided by a numbered list.

An abstract graphic in the top half of the image features three white circles of equal size. They are connected by thin white lines: a horizontal line connects the first two circles, and a diagonal line connects the second and third circles. Additionally, there are several long, thin, curved white lines that sweep across the upper portion of the frame, creating a sense of movement and depth.

PDF Remediation Basics

Fixing Tags

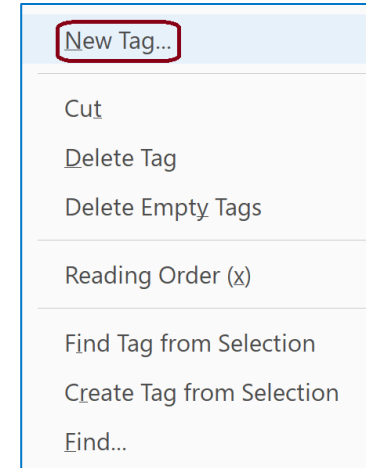
- Content Shall be Tagged in the Logical Reading Order
- Common areas for review:
 - Tables
 - Figures
 - Artifacts
 - Lists
- Unique issues depending on the source document and means of conversion:
 - Scanned Document
 - Role Mapping
 - Links
 - Form Fields

Note: Results depend on the conversion/tagging method

Editing in the Tag Tree – The Basics

Covered in specific exercises later.

- New Tag
 - Select where you want the new tag inserted in the Tag Tree (inserts below selected tag)
 - Right click to open the Context Menu
 - Select “New Tag” and the tag type
- Move Tags using “Drag and Drop” or “Cut and Paste”
- Use F2 as the keyboard shortcuts to edit a Tag



Fixing Tags - Headings Basics

Heading Hierarchy - Use [EX1 - Incorrect Heading Hierarchy](#)

- Unlike WCAG, PDF/UA allows for multiple H1 tags
- PDF/UA requires heading tags be in sequential order (WCAG does not)

Fixing Tags – List Basics

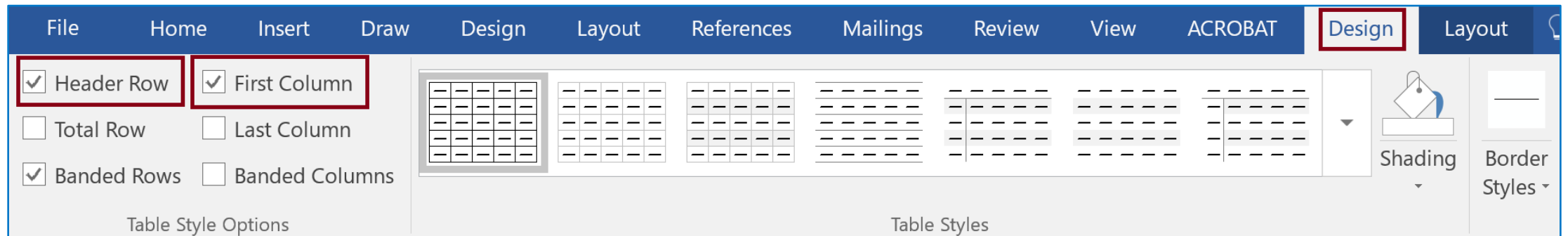
According to the PDF/UA ISO standard, a list must have the List <L> tag and List Item tags. They may also have the Label <Lbl> and List Body <Lbody> tags.

- Open PDF document [EX2 - Accessible PDF Demo Document](#)
- Open Tag Tree
- Find mis-tagged list items (usually will have a <P> tag)
- Create <L> tag
- Change list items <P> tags to tags and make them children of the <L> Tag

Table Header Cells - Office

Select in Word

- Header Row (Column Headers)
- First Column (Row Headers)



Fixing Tags – Basic Table

Column and Row Headers need to be tagged with the <TH> tag and data cells with the <TD> tag

Use PDF document [EX2 - Accessible PDF Demo Document](#)

- 1. Open Table Editor (context menu in Tag Tree or Reading Order tool)
- 2. Change Data (TD) Cell to Header (TH) Cell and set scope by selecting cell, right click to open context menu, and select Table Cell Properties

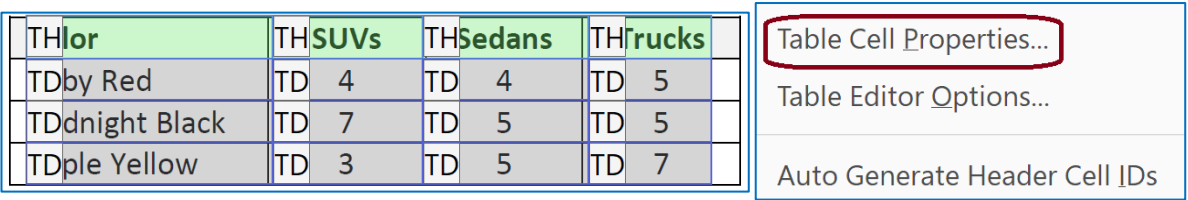
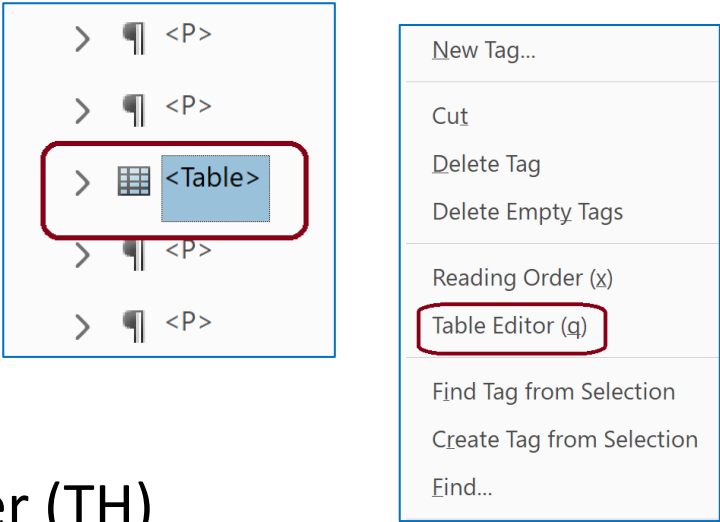


Table Header Cells - Acrobat

- Select Header Cell radio button
- Row Headers should have a scope of “Row”
- Merged Headers need both Scope and Span (Span for number of rows or columns spanned by the Header Cell)

Table Cell Properties

Type

☒ Header Cell Scope: None

☐ Data Cell

Attributes

Row Span: 1

Column Span: 1

ID:

Associated Header Cell IDs:

Warning

⚠ Conflicting values for the selected cells

OK Cancel

Table Cell Properties

Type

☒ Header Cell Scope: Row

☐ Data Cell

Attributes

Row Span: 1

Column Span: 1

ID:

Associated Header Cell IDs:

Warning

⚠ Conflicting values for the selected cells

OK Cancel

Tables with Merged Cells

Use document [EX2 - Accessible PDF Demo Document](#)

- Add scope and span to merged cells
- Match scope and span (e.g., Column to Column)

Table Cell Properties

Type

☒ Header Cell Scope: Column

☐ Data Cell

Attributes

Row Span: 1

Column Span: 3

Artifacts

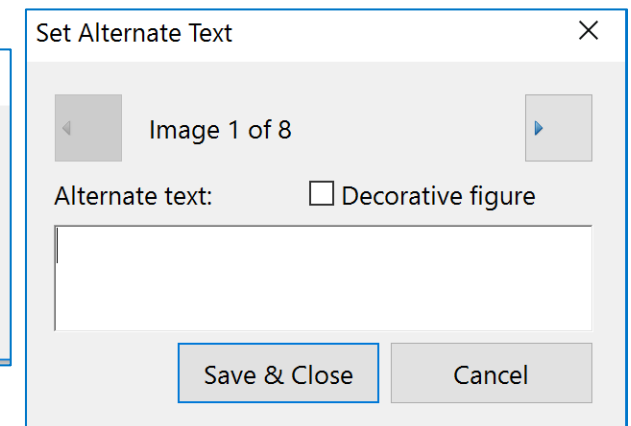
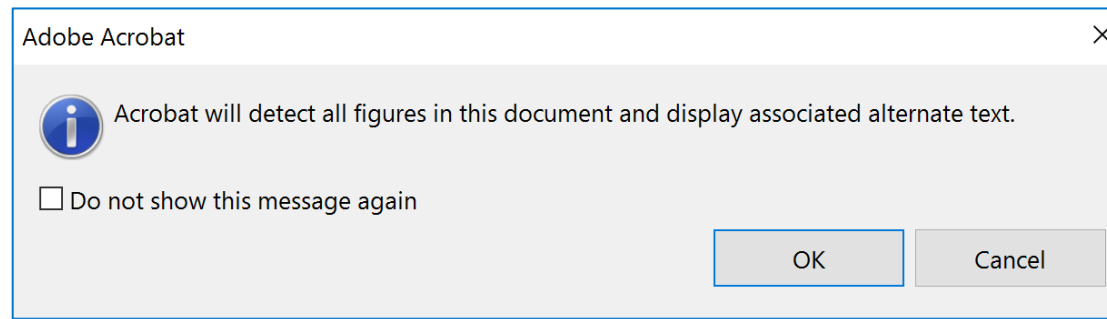
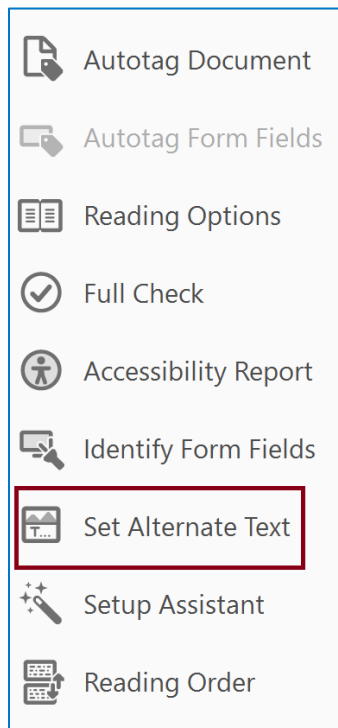
An artifact is content that does not provide meaningful information such as decorative images or line spaces. Artifacts should not be present in the Tag Tree.

Use PDF document [EX2 - Accessible PDF Demo Document](#)

1. Go to the Tag Tree
2. Look for empty <P> tags
3. Access the Reading Order tool from the Tag Panel
4. Select item number for content to be artifacted
5. Select “Background/Artifact” from the Reading Order tool
6. Note empty <P> tag is now gone and reading order number has shifted down.

Images

1. Use PDF document EX2 - Word Demo Doc with Errors
2. Figures with Captions (Artifact?)
3. Without Captions use Set Alternative Text tool found in the Accessibility Tool



Adobe Training Options and Materials

- Webinars

https://events-ar.adobeconnect.com/content/connect/c1/881497641/en/events/catalog.html?OWASP_CSRFTOKEN=1e73e0edb7545f3f9fdd08e895e134213f26efe05c1067bb15b4fc6234076238

- Webinar Recordings

<http://adobe.lookbookhq.com/acrobataccessibility>

Acrobat Pro DC Helpful Links and Resources

- Acrobat DC Accessibility
<https://www.adobe.com/accessibility/products/acrobat.html>
- Adobe Acrobat DC Accessibility Features
<https://www.adobe.com/accessibility/products/acrobat/acrobat-accessibility-features.html>
- Acrobat Reader DC Accessibility features
<https://helpx.adobe.com/reader/using/accessibility-features.html>
- Acrobat DC and Reader DC Accessibility Blogs
<https://theblog.adobe.com/document-cloud/> (search for PDF or Accessibility)
- Using the Acrobat Pro DC Accessibility Checker
<https://www.adobe.com/accessibility/products/acrobat/using-acrobat-pro-accessibility-checker.html>
- Create and verify PDF accessibility
<https://helpx.adobe.com/acrobat/using/create-verify-pdf-accessibility.html>
- Acrobat Pro DC PDF Accessibility Repair Workflow
<https://www.adobe.com/accessibility/products/acrobat/acrobat-pro-dc-pdf-accessibility-repair-workflow.html>

Adobe Accessibility Resources

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Accessibility Compliance

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PDF Standards

[ISO 32000](#) (free)

[ISO 14289 \(PDF/UA\)](#) (purchase)

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[deque-systems-inc](https://www.linkedin.com/company/deque-systems-inc)



[dequesystemsinc](https://www.youtube.com/dequesystemsinc)





Q & A