


Slide 1

PDF A11y 101
(formerly "Should You Remediate Your PDFs?")
By Bouton Jones
May 13-16, 2024
John Slatin AccessU 2024
St. Edward's University



Bouton Jones
IT Business Systems Analyst Senior
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My pronouns are he and him

Presentation Title: PDF A11y 101

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The easy ways to ensure your Microsoft Office documents and PDF files are fully accessible. The session will both demonstrate the experience of using assistive technology to read accessible and inaccessible documents from the perspective of blind employees and citizens. Also, it will explain how to apply optimal accessibility.

It will cover:

- The rise of PDF related lawsuits in Florida in 2019
- How and why some PDFs appear "Blank" to screen reader

- The cause and consequences of some document being "Untagged"
- The use and benefits of Semantic markup in documents
- The benefits of exporting over remediating PDFs
- The benefits and limitations of using Optical Character Recognition (OCR)
- The role and consequences of "renderable text" in a "searchable image"
- Quality assurance testing for Word and PDF

List 3 guaranteed audience takeaways

- How to prevent PDFs from appearing completely blank to screen readers
- How to format documents or PDFs so that blind employees and citizens can easily navigate them
- Learn the faster and more effective alternative to painstakingly remediating PDFs for Accessibility

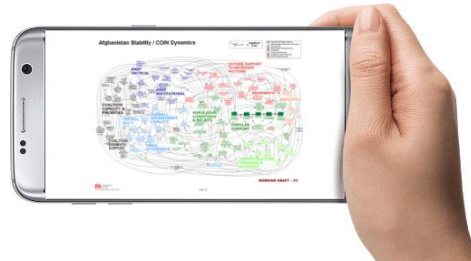
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Slide 2

Life is too short to be spent
photographing slides.




A handout containing all the slides and speaker notes can be found at
<http://bit.ly/2y0p5kJ> . (Someone will post this URL to chat.)

Life is too short to be spent photographing PowerPoint slides.

A handout containing all the slides and speaker notes can be found at <http://bit.ly/2y0p5kJ> (or <http://www.boutonjones.com/pub/a11y.html> .) Someone will post this URL to chat.

Special Thanks

- David Ondich
- Dax Castro



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Acknowledgement

Special Thanks to David Ondich.

David Ondich is a huge reason for why I put this presentation together as well and the manner and the content. David is the ADA Program Manager for the City of Austin and he is a user of assistive technology. Over the past two years David and I have been discussing and sharing information and perspective on this this topic. He's made me aware of situations that are otherwise invisible to me and I've explained to him the technological causes of his accessibility frustrations.

We've co-presented on Accessibility together several times. This session is largely based on that content but it's been expanded an refocused for a more technical perspective.

David Ondich, M.S., is the City of Austin, Americans with Disabilities Act Program Administrator and in 2014 was named Legal Subject Matter Expert on the Americans with Disabilities Act. His experience and education include

- 16 Years as ADA Program Manager or Coordinator for Austin and Fort Worth
- Master's Degree in Rehabilitation Counselling Psychology from UT Southwestern Medical School of Allied Health and 48 Doctoral hours in Rehabilitation Counseling from The University of Texas at Austin

He currently oversees municipal compliance with Titles I and II of the Americans with Disabilities Act, which includes:

- Providing feedback on accessibility to electronic information.
- Reviewing all employee requests for reasonable accommodations;
Consulting with department personnel regarding legal obligations under Titles I and II of the ADA
- Arranging for accommodations to allow the public access to all city facilities, programs and activities
- Providing training to city personnel regarding obligations under the ADA as amended.

“Nothing about us without us.”

Also

Obligatory Overview Slide

- Introduction
- Three identical PDFs examined through screen readers
- Microsoft Word
- Remediating PDFs
- Optical Character Recognition
- My Conclusion
- Questions



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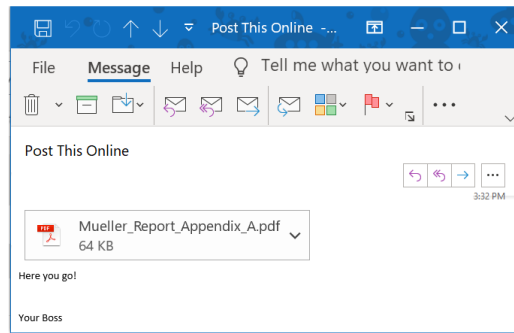
4

Obligatory Overview Slide

IMAGE: Verbose man surround by a cloud of “Blah! Blah! Blah!”

- Introduction
- Three identical PDFs examined through screen readers
- Microsoft Word
- Remediating PDF
- Optical Character Recognition
- WCAG and PDF/UA
- My Conclusion
- Questions

In My Experience as a Web Developer ...



Bouton Jones

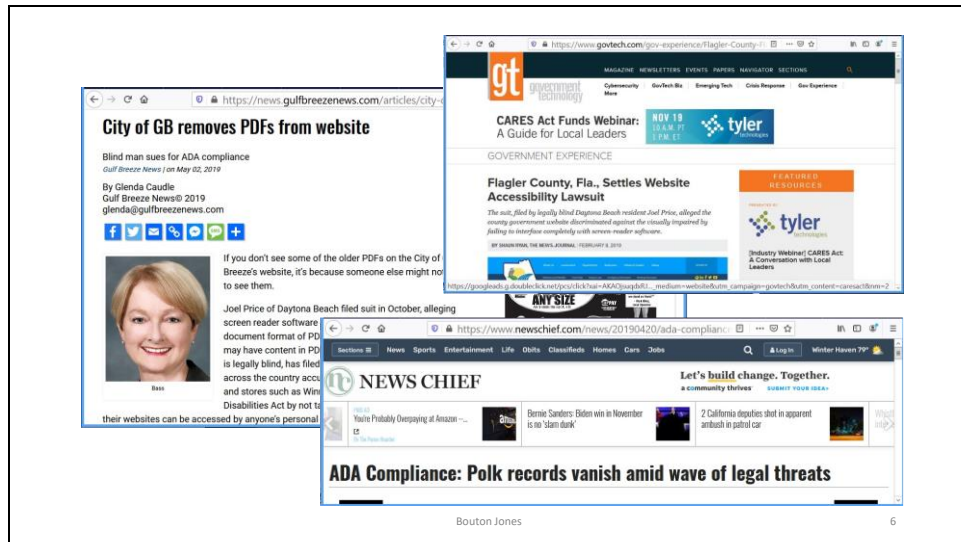
5

In My Experience as a Web Developer...

For over ten years I was a professional web developer. I was very conscientious about applying accessibility guidelines. But on occasion I would be given a PDF to post online and I would post it without considering whether it was accessible or not. My assumption was the PDF was accessible and there was nothing I needed to do but post the document and link to it.

My preconception changed a few years ago when David Ondich came to me for help with PDF documents that he had issues with.

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2019 Florida A11y Lawsuits

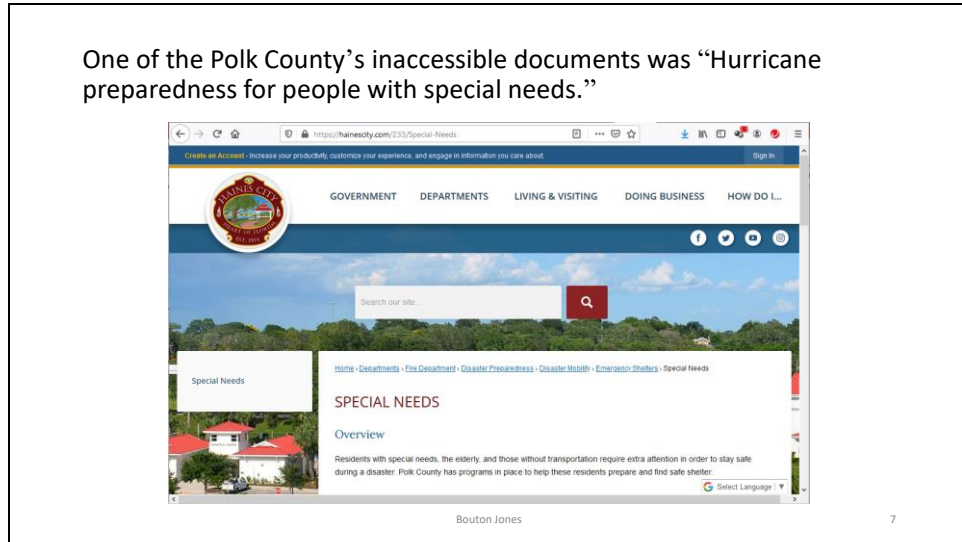
- One law firm and plaintiff sued multiple counties and municipalities over inaccessible websites.
- A suit against Flager County was filed 6 months after the plaintiff reported the problem.
- 75% of the IT directors at a Florida conference had seen similar lawsuits.
- Settlements ranged from \$10,000 to \$ 19,000.
- The web pages were not cited as the problem. It was the PDFs.

CITE:

- <http://www.govtech.com/gov-experience/Flagler-County-Fla-Settles-Website-Accessibility-Lawsuit.html>
- <https://www.newschief.com/news/20190420/ada-compliance-polk-records-vanish-amid-wave-of-legal-threats>
- <https://news.gulfbreezenews.com/articles/city-of-gb-removes-pdfs-from-website/>

Slide 7

One of the Polk County's inaccessible documents was "Hurricane preparedness for people with special needs."



"Hurricane preparedness for people with special needs"

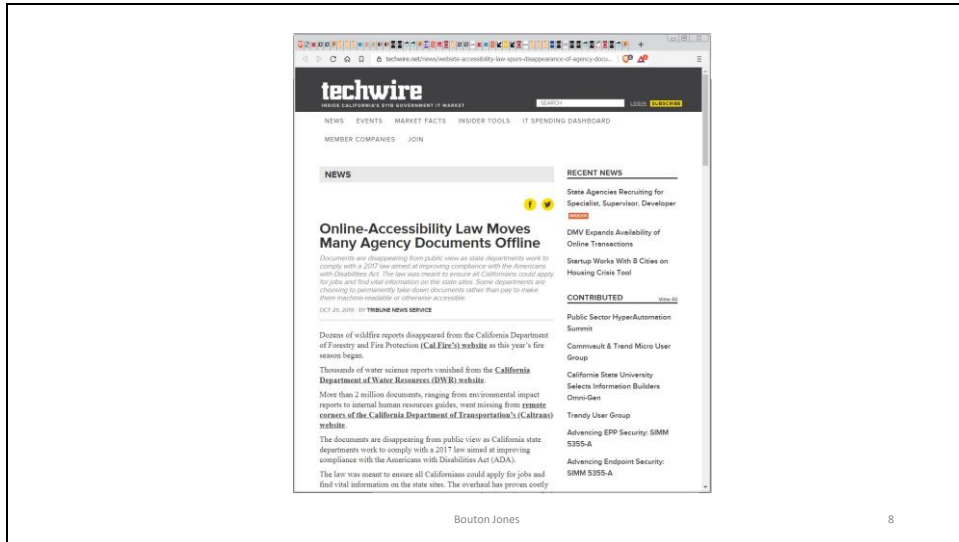
By the way, one of the Polk County's inaccessible documents was "Hurricane preparedness for people with special needs."

Polk county opted to remove the pamphlet --- as well as all other PDFs --- from its web site.

Image: Screen capture of the "Special Needs" page on the Haines City, FL web site.

CITE: <https://www.newschief.com/news/20190420/ada-compliance-polk-records-vanish-amid-wave-of-legal-threats>

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In response to legal mandates and community pressure, some municipalities and government entities have opted to remove content completely rather than spend the necessary time and resources to make them accessible.

This is especially dangerous when you consider that some of the content was important information that really needed to be shared with the public.

NEWS STORY: Online-Accessibility Law Moves Many Agency Documents Offline

CITE: <https://www.techwire.net/news/website-accessibility-law-spurs-disappearance-of-agency-documents.html>

Slide 9

"PDF allows the user to view a file precisely—down to the pixel, essentially, of what the author had intended."
- Bob Wulff, Adobe's Senior Vice President of Cloud Technology

Benefits	Originally	Currently
Universal Viewing	Y	Y
Control of the appearance	Y	Y
Free to read	Y	Y
Secure *	Y	<i>Meh!</i>
Quick and Easy	Y	Y
Compact	Y	Y
Fillable		Y
Signable		2000
Interactive		1996
Password protection		1994
Multimedia		2003

*While many of us consider the format secure, most PDFs can be modified after they are published.

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PDF Benefits

- PDF was created by John E. Warnock, co-founders of Adobe Systems Inc.
- It was initially launched in 1993 as a proprietary format
- In 2008, it was released an ISO open standard which means that if Adobe ever goes out of business, the PDF format will remain available and supported.

"PDF allows the user to view a file precisely—down to the pixel, essentially, of what the author had intended."

- Bob Wulff, Adobe's Senior Vice President of Cloud Technology

"PDF was developed in the early 1990s as a way to share documents, including text formatting and inline images, among computer users of disparate platforms who may not have access to mutually-compatible application software.[1]It was created by a research and development team called Camelot,[2] led by Adobe's co-founder John Warnock."

CITE: [https://en.wikipedia.org/wiki/History_of_the_Portable_Document_Format_\(PDF\)](https://en.wikipedia.org/wiki/History_of_the_Portable_Document_Format_(PDF))

Tabl with three columns, the table headers are: Benfits, Originally, and Currently.

Original Benefits

- Universal Viewing (regardless of OS or Productivity Suite)
- Control of the appearance

- Free to read
- Secure *
- Quick and Easy
- Compact

Over time the following features were added

- Fillable
- Signable
- Interactive
- Password protection
- Multimedia

*While many of us consider the format secure, most PDFs can be modified after they are published.

Is PDF the best option?

Avoid PDF for On-Screen Reading

Forcing users to browse PDF files causes frustration and slow task completion, compared to standard webpages. Use PDF only for documents that users will print. In those cases, following 10 basic guidelines will minimize usability problems. (11 min. to read)



Avoid PDF for On-Screen Reading

Forcing users to browse PDF files causes frustration and slow task completion, compared to standard webpages. Use PDF only for documents that users will print...

gcr01.safelinks.protection.outlook.com

<https://www.nngroup.com/articles/avoid-pdf-for-on-screen-reading/>

9:20 AM

PDF: Still Unfit for Human Consumption, 20 Years Later

Research spanning 20 years proves PDFs are problematic for online reading. Yet they're still prevalent and users continue to get lost in them. They're unpleasant to read and navigate and remain unfit for digital-content display. (9 min. to read)



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gcr01.safelinks.protection.outlook.com

<https://www.nngroup.com/articles/pdf-unfit-for-human-consumption/>

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Is PDF the best option?

PDFs are good for:

- printing
- fillable forms
- signing

Don't use a PDF where a web page will do as well --- or better.

Related Usability Articles from the Nielsen Norman Group:

- Avoid PDF for On-Screen Reading - <https://www.nngroup.com/articles/avoid-pdf-for-on-screen-reading>
- PDFs: Still Unfit for Human Consumption 20 Years Later - <https://www.nngroup.com/articles/pdf-unfit-for-human-consumption/>

Three Visually Identical PDFs

They have the exact same content, title, headers, font, and colors. So how are they different?

Digital Accessibility for All Citizens

Last Revised on 5/14/2017 by **Bouton Jones**

Please review and expand this document as appropriate.

Description

With the recent final rule by the U.S. Access Board about Section 508 of the Rehabilitation Act of 2011, there is a renewed urgency for more agencies to make their digital assets – including Web documents, PDF files, PowerPoint files, audio, computer based training, video, email, and web pages – accessible to all citizens including those with disabilities.

In this session the ADA/508 Program Manager for the City of Austin – and a team of Adaptive Technology – will explain the recent legal and practical necessity for providing full accessibility and explain and describe the consequences of that accessibility.

All IT assets in the City of Austin's IT department will offer specific technical solutions for how well information officers will effective strategies for larger COO operations. This session will benefit IT specialists from other large and small.

Who, What, Where, and When

Team Association of Municipal Information Officers (TAMIO)
Lighthouse Report and Date
Thursday, June 8, From 8:00 - 4:45 pm and Friday, June 9, From 8:00 - 12:00 pm

Content Requirements

- Requirements for Accessibility
- What the experience of accessibility means for
- How to apply Accessibility
- How to apply Accessibility
- Additional Resources

Presentation Requirements

- Platform to edit and share
- Preparation for Author
- Content/Structure
- Specifications for Author File

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Three Visually Identical PDFs

They have the exact same content, title, headers, font, and colors. So how are they different?

First PDF

Digital Accessibility for All Citizens

User Feedback on NVDA/2017 by Bouton Jones

Please review and expand this document as appropriate.

Description

1000 for review. See link for the U.S. Access Board about Section 508 of the Rehabilitation Act of 1973. There is a request, agency for Accessibility to make their digital assets – including their documents, all files, spreadsheets, etc. items, electronic based training, videos, email, and web pages – accessible to all citizens including those with disabilities.

In this session the ADO/ADA Program Manager for the City of Austin -- and a user of adaptive technology -- will explain the current legal and technical aspects for creating full accessible and usable and discuss the implementation of full accessibility.

Just finished in the City of Austin HR department will offer specific technical solutions for how staff information officers and officers arrange for larger CD organizations. This session will benefit ADO interested from technology and staff.

Who, What, Where, and When

Team Accessibility of Multilingual Information Officers (MAMI)

online, Hybrid and live

Thursday, June 8, 2017, 3:45 - 4:45 pm and Friday, June 9, 2017 - 10:45 pm

Content Requirements

- Reason for Accessibility
- What the Organization of Accessibility Why needed this
- How to Apply Accessibility
- How to perform accessibility quality assurance
- Additional Resources

Presentation Requirements

- Publish on slide and chat
- Progress for notes
- Accessibility
- Support for audio file

JAWS **NVDA**

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The Scanned PDF


To users of assistive technology, scanned PDFs are blank.

AUDIO: Jaws and NVDA *fail* to read this PDF.

“Blank” or “Image Only” PDFs



PITFALL: When you scan a printed document – e.g. a signed contract, police report, corporate policy, or anything requested for discovery – it is no more than an image of the hard copy. It will not be accessible to screen readers in its current form.



“A picture may be worth a thousand words --- but not if it's a picture of a thousand words that you're trying to read with accessible technology.”
- David Ondich
ADA Program Manager for the City of Austin

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“Blank” or “Image Only” PDF

PITFALL: When you scan a printed document – e.g. a signed contract, police report, corporate policy, or anything requested for discovery – it is no more than an image of the hard copy. It will not be accessible to screen readers in its current form.

If you can't “copy and paste” text, it most likely is an image.

As David has said “A picture may be worth a thousand words --- but not if it's a picture of a thousand words that you're trying to read with accessible technology.”

Slide 14

The screenshot shows a PDF document titled "Second PDF". The main content is a page titled "Digital Accessibility for All Citizens". The page contains several sections of text, including a "Description" section, a "Who, What, Where, and When" section, and two sections of requirements: "Content Requirements" and "Presentation Requirements". The "Content Requirements" section includes a bulleted list: "• Means for Accessibility", "• When the experience of digital accessibility needs the", "• How to apply Accessibility", and "• How to ensure accessibility quality assurance". The "Presentation Requirements" section includes a bulleted list: "• Reduce color and text", "• Provide for layout", "• Consistency", and "• Support for audio files". Below the PDF content, there are three blue buttons: "Read Text", "Read Headings", and "Read Lists". At the bottom of the slide, the text "Bouton Jones" and the number "14" are visible.

Untagged PDF with Text

Untagged PDFs contain true text but they can't be navigated. Screen readers can read the content but they can't find the headers or the lists. The tags have been stripped from the document.

Audio files:

- A screen reader reads the text
- A screen reader fails to read the headers
- A screen reader fails to read the lists

Question: When is a PDF with text an “untagged” document?

Answer 1 of 2: When *semantic* markup is not used to *tag* the structural elements in a document, the document is called “untagged.” If the source of a PDF is an untagged document, the PDF will also be untagged.

Question: When is a PDF with text an “untagged” document?

Answer 1 of 2: When *semantic* markup is not used to tag the structural elements in a document, the document is called “untagged.” If the source of a PDF is an untagged document, the PDF will also be untagged.

Tagged PDFs:

1. "Tagged PDF (PDF 1.4) is a stylized use of PDF that builds on PDF's logical structure framework. It defines a set of standard structure types and attributes that allow page content (text, graphics, and images) to be extracted and reused for other purposes"
(CITE: "PDF Technology Notes" at https://www.w3.org/WAI/GL/WCAG20-TECHS/pdf_notes.html)
2. A PDF file that -- in addition to text and graphics -- contains meta-data for text-extraction, content-reflow, document accessibility, geographic information in PDF containing maps, etc.,

With the correct tags, a screen reader can:
 - Understand where headings fall
 - Follow the correct reading order
 - Identify footnotes & graphics
 - Understand the structure of tables
 - Complete fillable forms
In most cases, tags are necessary in order to make a PDF file comply with Section 508.

(CITE: "What is 'Tagged PDF?'" <http://stackoverflow.com/questions/6397984/what-is-tagged-pdf>)

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Tagged PDFs:

- Tagged PDF (PDF 1.4) is a stylized use of PDF that builds on PDF's logical structure framework. It defines a set of standard structure types and attributes that allow page content (text, graphics, and images) to be extracted and reused for other purposes“ (CITE: "PDF Technology Notes“ at https://www.w3.org/WAI/GL/WCAG20-TECHS/pdf_notes.html)
- A PDF file that -- in addition to text and graphics -- contains meta-data for text-extraction, content-reflow, document accessibility, geographic information in PDF containing maps, etc.,

With the correct tags, a screen reader can:

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In most cases, tags are necessary in order to make a PDF file comply with Section 508.

CITE: "What is 'Tagged PDF'?" <http://stackoverflow.com/questions/6397984/what-is-tagged-pdf>

Question: When is a PDF with text an “untagged” document?

Answer 1 of 2: When *semantic* markup is not used to *tag* the structural elements in a document, the document is called “untagged.” If the source of a PDF is an untagged document, the PDF will also be untagged.

Answer 2 of 2: When you *print* a document to PDF. The text is saved to the PDF but the tags for indicating structure are lost.


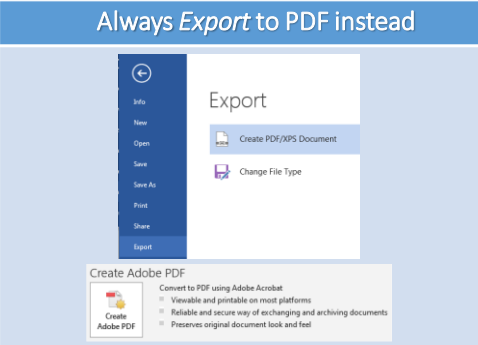
Question: When is a PDF with text an “untagged” document?

Answer 2 of 2: When you *print* a document to PDF. The text is saved to the PDF but the tags for indicating structure are lost.

One surprising exception is tables. I printed (to PDF) a Word document containing a table. Both cells of the table included multiple lines of text. I expected the screen reader to ignore the table cells and read the entire content left to right. But both JAWS and NVDA read all the line of text in the first cell before reading all the lines of text in the next cell.

I tried using Word’s column function. NVDA was able to read a two column PDF printed from Word correctly.

Export to PDF

Never <i>Print</i> to PDF!	Always <i>Export</i> to PDF instead
	
<p>Never print to PDF. Always export to --- or save as --- PDF. That way the semantic formatting (the tags) will be included. <i>Export to PDF is a better option than Save as PDF.</i></p>	

Tuesday, May 7, 2024 Bouton Jones 18
Get the slides and notes at <http://bit.ly/2y0p5kj> 18

In Review (Slide 2 of 5): Save to PDF

TABLE: Two column table comparing Print to PDF with Export to PDF.

Never print to PDF. Always export to --- or save as --- PDF. That way the semantic formatting (the tags) will be included.

Export to PDF is a better option than Save as PDF.

Third PDF

Digital Accessibility for All Citizens

Self-Hosted on 5/4/2021 by Bouton Jones

Please review and expand this document as appropriate.

Description:

With the recent final rule by the U.S. Access Board about Section 508 of the Rehabilitation Act of 2011, there is a renewed emphasis on ensuring that content meets digital needs – including Web content, PDF files, audio and video files, and other content. This document provides information on how to ensure that all citizens including those with disabilities can access and use digital content.

In this section the ADA/508 Program Manager for the City of Austin – with a team of volunteer technology consultants – will provide an overview, apply and practice examples for providing that accessibility of content and usability for consumption of that content.

An IT specialist in the City of Austin's IT department will offer specific technical solutions for how staff information officers and outreach strategies for larger CO organizations. This section will research PD capabilities from other large orgs.

Who, What, Where, and When

These Association of Municipal Information Officers (AMIO) Conference Report and Note
Thursday, April 8, 2021 8:45 am and Friday, April 9, 2021 12:45 pm

Contact Requirements:

- Review for Accessibility
- What the experience of end accessibility sounds like
- How to create accessibility
- How to confirm accessibility quality assurance
- Additional Resources

Presentation Requirements:

- Publish on Intra and other
- Prepare for content
- 2 microformats for PDF
- Content for audio files

Read Text Read Headings Read First List

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Tagged PDF with Text

Bouton explains (and demonstrates) *navigating* a PDF with text and navigation (such as headers and lists.)

Screen readers (such as Jaws and NVDA) will identify headers and list in a tagged PDF.

Audio files:

- A screen reader reads the text
- A screen reader reads the headers
- A screen reader reads the first list

We'll return to semantic markup in just a bit.

Two Ways to Make Accessible PDFs:

1. Exporting
2. **REMEDICATION**

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Two Ways to Make Accessible PDFs:

1. Exporting
2. Remediation

The word remediation looks like it's written in blood. It uses a decorative font that belongs on a poster for a horror movie or on the cover of a horror comic book.

Four Steps in Exporting to PDF

1. Create fully accessible source documents (E.G. Microsoft Word documents “.docx”) or web pages.
2. Validate that the Office documents or web pages as fully accessible as possible.
3. Export the Office documents or web pages into PDFs.
4. Validate that the *PDFs* are as accessible as possible.

Four Steps in Exporting to PDF

- Creating fully accessible source documents (e.g. Microsoft Word documents “.docx”) or web pages
- Validating that the Word documents or web pages are truly and fully accessible. (Make them as fully accessible as possible.)
- Exporting the Word documents or web pages into PDFs
- Validating that the *PDFs* are truly and fully accessible

Slide 22

Microsoft Word Accessibility

Microsoft Office Accessibility (title slide)

Semantic Markup (or “Structural Markup”):

1. (In Technical and Business Writing) naming sections of text according to the structural role they play in the document. (CITE: “Highlighting and Emphasis” in *Online Technical Writing* by David McMurrey at <https://www.prismnet.com/~hcexres/textbook/>)
2. (In Information Technology) the use of a markup language such as HTML to convey information about the meaning of each element in a document through proper selection of markup elements, and to maintain complete separation between the markup and the visual presentation of the elements contained in the document.

Semantic Markup (or “Structural Markup”):

- (In Technical and Business Writing) naming sections of text according to the structural role they play in the document. (CITE: “Highlighting and Emphasis” in *Online Technical Writing* by David McMurrey at <https://www.prismnet.com/~hcexres/textbook/>)
- (In Information Technology) the use of a markup language such as HTML to convey information about the meaning of each element in a document through proper selection of markup elements, and to maintain complete separation between the markup and the visual presentation of the elements contained in the document.

Presentational Markup vs. Semantic Markup (in HTML)

The current best practice is to use cascading styles --- rather than HTML tags --- for presentational markup.

Presentational HTML	Semantic HTML
<ul style="list-style-type: none">• Strong• Bold• Font size• Font Color• Background Color• Strikethrough• Underline	<ul style="list-style-type: none">• Title• Heading• List• Paragraph• Blockquote• Code• Definition• Cite

Bouton Jones

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Presentational HTML vs. Semantic HTML

A table comparing presentational and semantic HTML.

Presentational HTML

- Strong
- Bold
- Font size
- Font Color
- Background Color
- Strikethrough
- Underline

Semantic HTML

- Title
- Heading
- List
- Paragraph
- Blockquote
- Code
- Definition
- Cite

Presentational Markup vs. Semantic Markup (in Microsoft Word)

Appearance vs. Significance

Presentational Markup	Semantic Markup
<ul style="list-style-type: none">• Bold• <i>Italic</i>• <u>Underline</u>• Strike-through• Highlight• Text color• Borders• font-face• font-size	<ul style="list-style-type: none">• Title• Header• Definition• Language• Numbered list• Table• Label• Footnote• Caption• Citation• Hyperlink• Quote

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Presentational Markup vs. Semantic Markup

IMAGE: A table listing examples of presentational markup and semantic markup.

Presentational Markup

- bold
- italic
- underline
- red, green, blue, etc.,
- borders
- font-face
- font-size
- strike-through
- line break

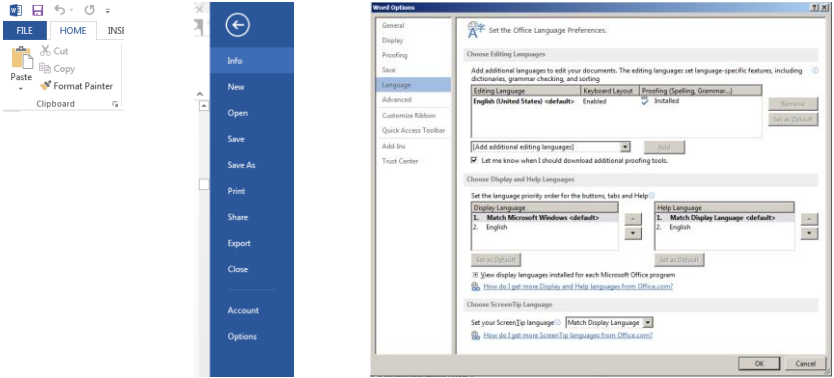
Semantic Markup

- title
- header

- definition
- language
- numbered list
- table
- label
- footnote
- caption
- citation

Language Tagging

FILE tab > Options option > Language option > Select language > Click OK button

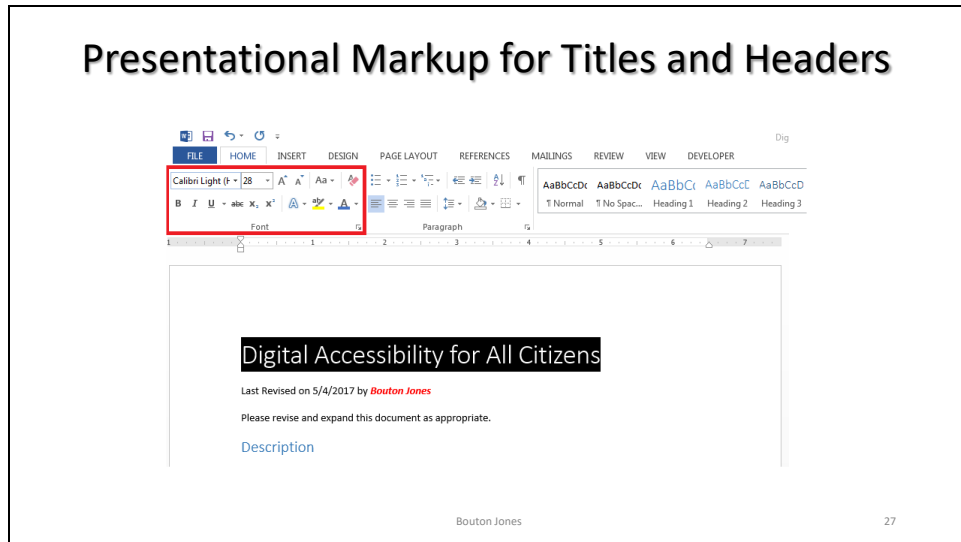


The screenshot illustrates the steps to access the language settings in Microsoft Word. On the left, the FILE tab is selected, and the Options button is visible in the bottom right of the ribbon. The Options pane is open, showing the Language option selected. The Word Options dialog box is open to the Language tab, showing the 'Choose Editing Languages' section with 'English (United States)' selected as the default editing language. The 'Choose Display and Help Languages' section shows 'Match Microsoft Windows' and 'English' as the display and help languages. The 'Choose ScreenTip Language' section shows 'Match Display Language' selected. The OK button is visible at the bottom right of the dialog box.

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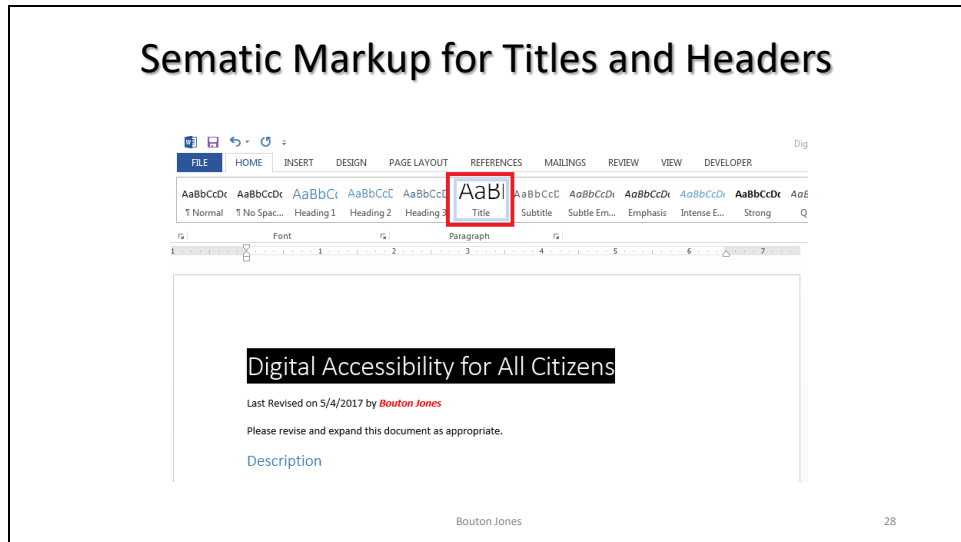
Language Tagging

In Word: FILE tab > Options option > Language option > Select language > Click OK button



Presentational Markup for Titles and Headers in Microsoft Office

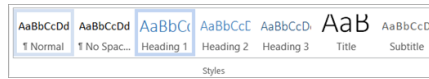
IMAGE: Screen capture of a Word document with the title selected by the cursor and a red rectangle surrounding the FONT presentation setting.



Semantic Markup for Titles and Headers in Microsoft Office

IMAGE: Screen capture of a Word document with the title selected by the cursor and a red rectangle surrounding the Title tag in the Semantic formatting setting.

Customize or Create New Styles in Word



1. Select text in your document that has the **style** applied, such as **Heading 1**.
2. Format the selected text with the **new** attributes that you want.
3. On the Home tab, in the **Styles** group, right-click the **style** that you want to change, and then click Update [**Style Name**] to Match Selection.

CITE: <https://support.office.com/en-ie/article/customize-or-create-new-styles-in-word-d38d6e47-f6fc-48eb-a607-1eb120dec563>

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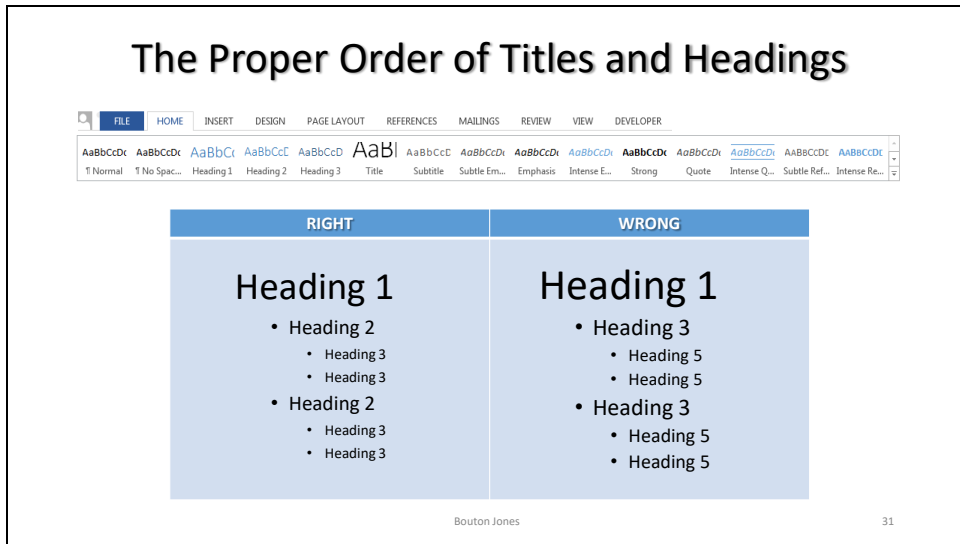
30

Customize or Create New Styles in Word

[IMAGE: Screen capture of the Styles tabs in the MS Word Ribbon]

- Select text in your document that has the style applied, such as Heading 1.
- Format the selected text with the new attributes that you want.
- On the Home tab, in the Styles group, right-click the style that you want to change, and then click Update [Style Name] to Match Selection.

CITE: <https://support.office.com/en-ie/article/customize-or-create-new-styles-in-word-d38d6e47-f6fc-48eb-a607-1eb120dec563>



The Proper Order of Titles and Headings

Don't skip header levels.

[IMAGE: Screen capture of the Styles tabs in the MS Word Ribbon]

Table with two columns and two rows.

Right

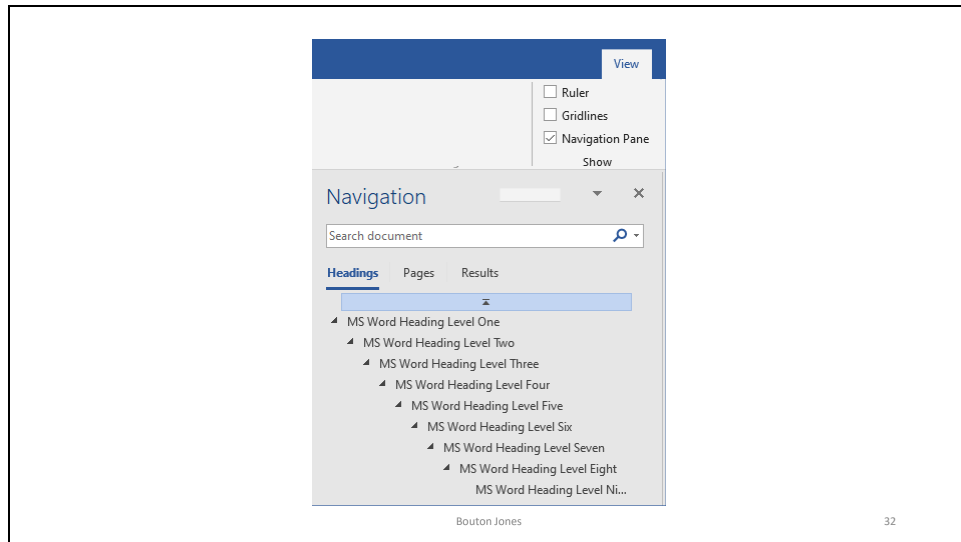
- Heading 1
 - Heading 2
 - Heading 3
 - Heading 3
 - Heading 2
 - Heading 3
 - Heading 3

Wrong

- Heading 1
 - Heading 3

- Heading 5
- Heading 5
- Heading 3
 - Heading 5
 - Heading 5

Slide 32



Displaying the Word Navigation Pane

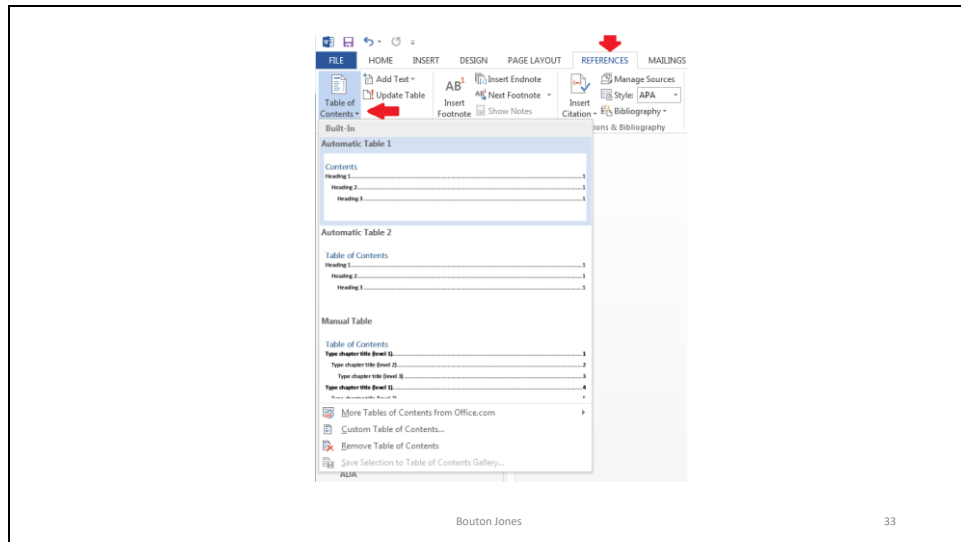
IMAGE: Screen capture shows the navigation panel in Word. The “Navigation Pane” checkbox under the file tab is checked.

- Select the View tab
- Check the Navigation Pane Checkbox.

"A non-web example of the benefits of a structural approach to content markup can be found when using Microsoft Word. If headings are used consistently throughout a document, then a table of contents can be generated auto-magically. If text has only been styled to look like a heading, then the program cannot distinguish headings from body copy, and the resulting table of contents is likely to be meaningless."

CITE: <http://www.motive.co.nz/glossary/markup.php>

Slide 33



Adding a Table of Contents

IMAGE: Screen capture of Table of Contents panel in MS Word.

Assuming you have been using header tags correctly:

- Put your cursor where you want to add the table of contents.
- Go to References > Table of Contents, and choose Automatic Table 1 or Automatic Table 2.
- If you make changes to your document that affect the table of contents, update the table of contents by right-clicking the table of contents and choosing Update Field.

CITE: <https://support.office.com/en-ie/article/insert-a-table-of-contents-882e8564-0edb-435e-84b5-1d8552ccf0c0>

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Weekly Meeting for Claudia Paniagua & Bouton Jones Thursday, May 3, 2019

Contents

CBI Application/Flowcharts and eCareers.....	2
CBI Application/Flowcharts.....	2
eCareers.....	3
Banner Audits.....	4
Banner Timekeeper CBT.....	4
Banner Training – Enrollment and Manuals.....	5
Banner User Administration.....	6
Banner – Miscellaneous.....	7
Kronos.....	7
Records Division.....	7
From: Webb, Alexander Sent: Friday, April 12, 2019 5:23 PM To: Jones, Bouton <Bouton.Jones@austintexas.gov> Cc: Garretson, Dorothy <Dorothy.Garretson@austintexas.gov>; McCabe, Kevin <Kevin.McCabe@austintexas.gov> Subject: RE: Noting Legal Holds in EDIMS.....	
Diversity Recruitment.....	9
Diversity Recruitment User Stories.....	9
ADA.....	10
Cityspace and Austintexas.gov.....	11

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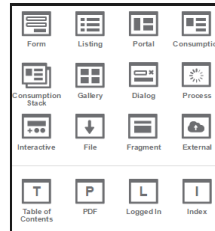
Table of Contents Example (Screen Capture)

Avoid Using Tables for Layout

Tabular Data

Table of baby-name data (baby-2010.csv)			
name	rank	gender	year
Jacob	1	boy	2010
Isabella	1	girl	2010
Ethan	2	boy	2010
Sophia	2	girl	2010
Michael	3	boy	2010

Layout



This guideline is more important for web pages (HTML) than MSO or PDFs. And it's less important if you don't include a header row.

Avoid Using Tables for Layout

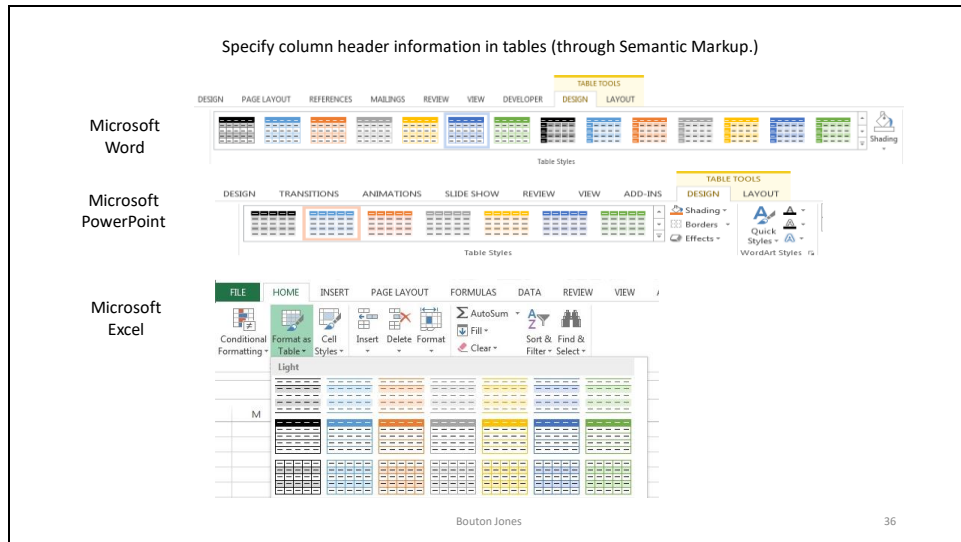
IMAGES:

- Tabular Data (screen capture)
- Layout (screen capture)

This guideline is more important for web pages (HTML) than MSO or PDFs.

If you must use tables for layout, don't include column headers.

Slide 36



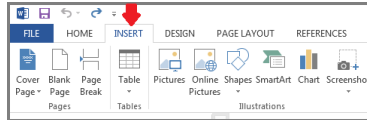
Specify column header information in tables (through Semantic Markup.)

Three SCREEN Captures: Select the table styles that include header rows:

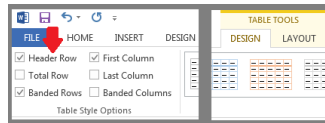
- In Word
- In PowerPoint
- In Excel

Include Header Rows in Tables When Inserting Tables in Word

1. In Word, select the **INSERT** tab and then the **Table** icon.



2. Check the **Header Row** option under the **DESIGN (TABLE TOOLS)** tab.



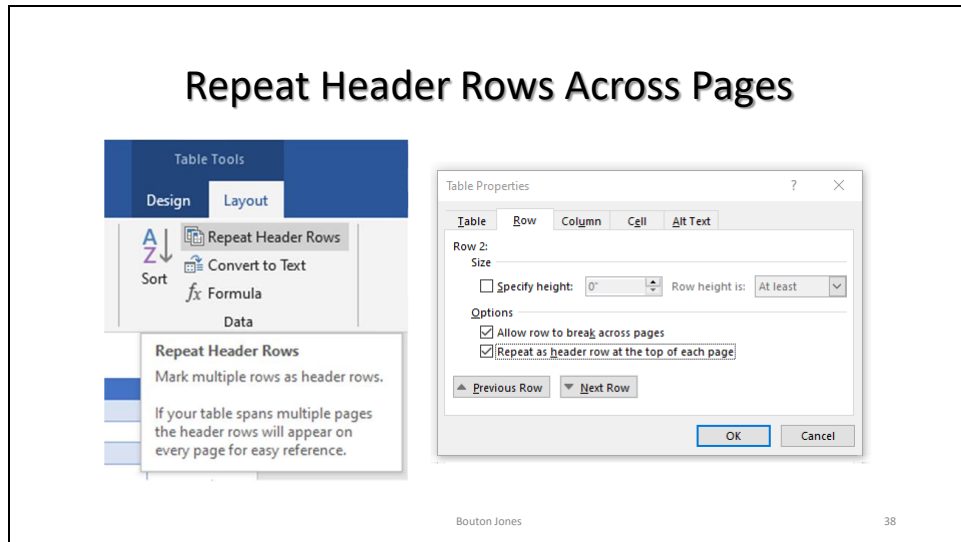
Bouton Jones

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Include Header Rows in Tables When Inserting Tables in Word

- In Word, select the **INSERT** tab and then the **Table** icon.
- Check the **Header Row** option under the **DESIGN (TABLE TOOLS)** tab.

IMAGES: screen captures to illustrate both steps



Header Rows Across Pages

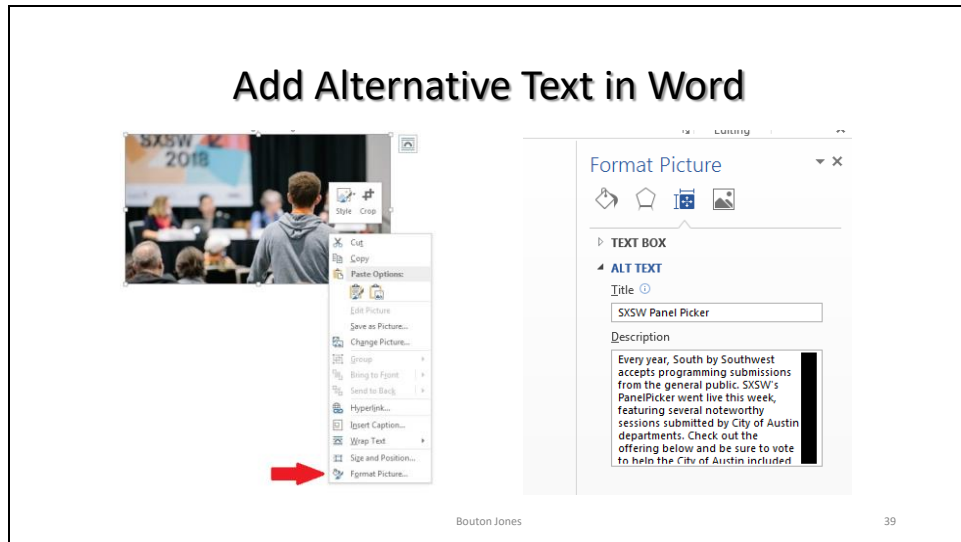
IMAGE: Screen Capture of Word document with table selected.

- Select the table
- Select the Layout tab (in the Table Tools group.)
- Select the Repeat Header Rows function

Or, you can use this approach:

1. In the table, right-click in the row that you want to repeat, and then click Table Properties.
2. In the Table Properties dialog box, on the Row tab, select the Repeat as header row at the top of each page check box.
3. Select OK.

CITE: <https://support.microsoft.com/en-us/office/repeat-table-header-on-subsequent-pages-2ff677e0-3150-464a-a283-fa52794b4b41>



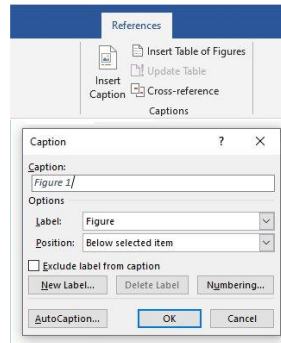
Add Alternative Text in Word

You can add alt text to an image in Word similarly to adding it in HTML. When you export the Word document to PDF the Alt text will be exported as well.

- Select picture and right click
- Select “Format Picture” from the Context menu
- Select the “Layout & Properties” icon in the Format Picture menu
- Select ALT TEXT option
- Populate the Title and/or the Description
- Close the Format Picture menu. Your changes will be saved.

[IMAGES: screen captures to illustrate the Context menu and the Format Picture menu]

Inserting Captions in Word



Inserting Captions in Word

- Select the Reference tab
- Select the Insert caption icon
- Populate the Caption window which will open



Not A11y

- Word Art
- Text Boxes
- Tables for layout

Not Equitable

- Page borders
- Watermarks / Backgrounds
- Headers & Footer

Resist Flare

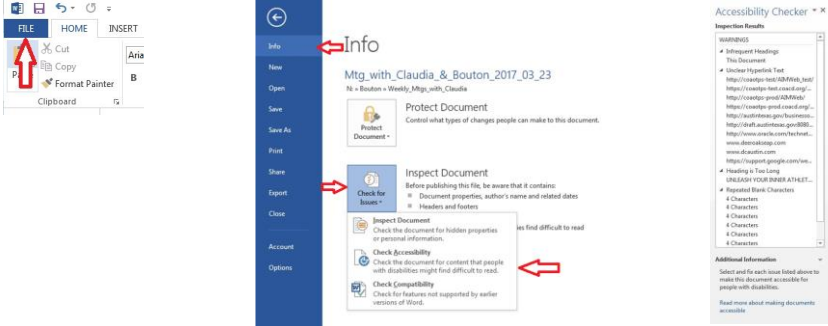
Features that are not accessible:

- Word Art
- Text Boxes
- Tables used for layout.

Features that are not equitable:

- Page borders
- Watermarks / Backgrounds
- Headers & Footer

Validate Word for Accessibility



PITFALL: Recent editions of Microsoft Word include a built in accessibility checker. But in order for the accessibility check to run on a document, the document must be saved with the default .docx extension. If you try to save the document using another format -- such as .doc -- the accessibility checker won't run.

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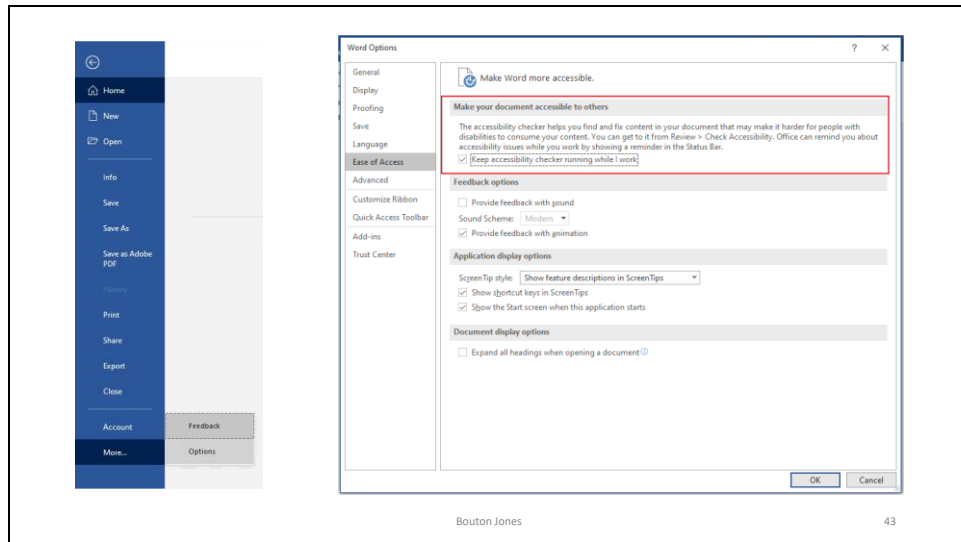
Validate Word for Accessibility

To validate your Microsoft Word document (*.docx) in Word:

- Select the file tab in the Office Ribbon.
- In the File view, select the Info option
- Select the Inspect Document button.
- Select the Check Accessibility option

PITFALL: Recent editions of Microsoft Word include a built-in accessibility checker. But for the accessibility check to run on a document, the document must be saved with the default .docx extension. If you try to save the document using another format -- such as .doc -- the accessibility checker won't run.

Slide 43



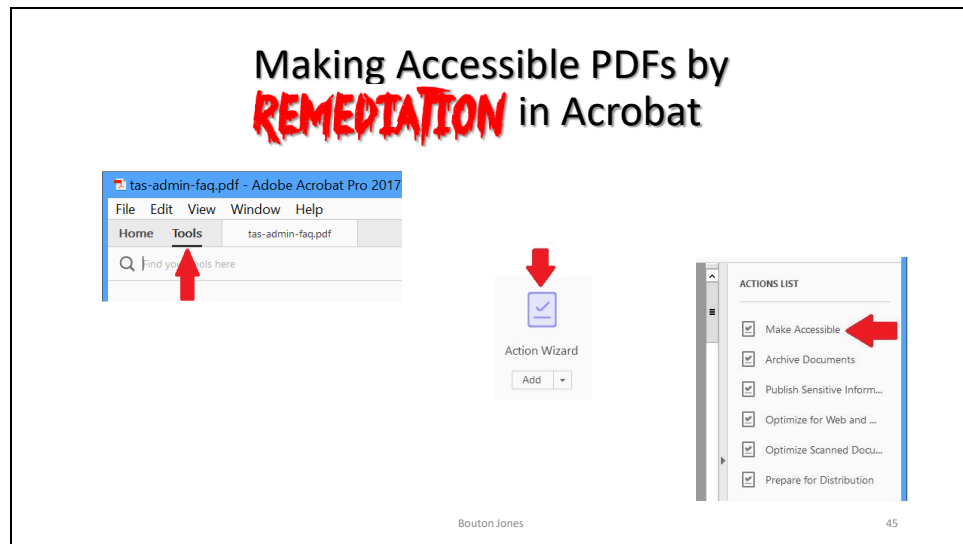
Check accessibility while you work

- Select the File tab
- Select the More ... option
- In the Word Options window, select the Ease of Access option in the left-hand side navigation panel
- Check the check box for “Keep accessibility checker running while I work.”
- Click the OK button.

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Adobe Acrobat Accessibility

Adobe Acrobat Accessibility (title slide)



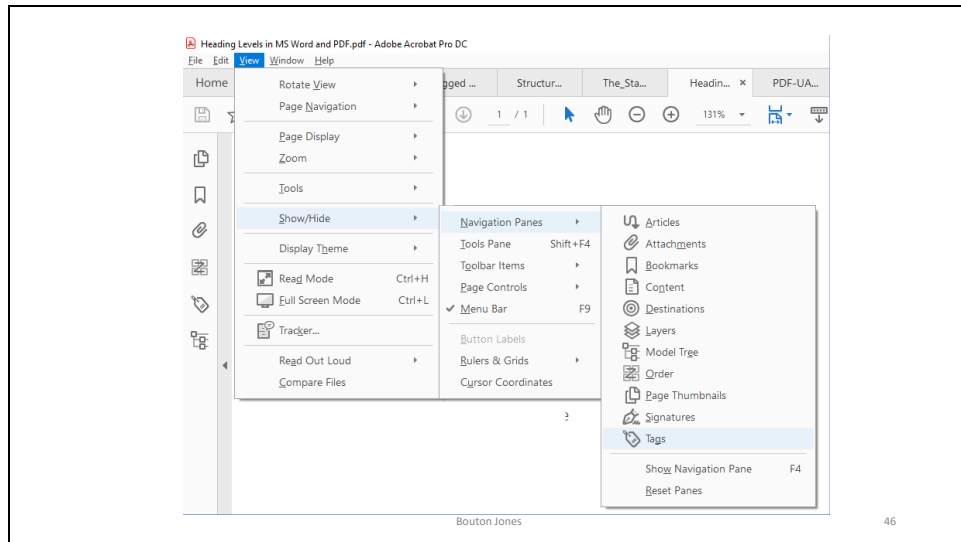
Making Accessible PDFs by Remediation in Acrobat

The Make Accessible Action Wizard in Adobe Acrobat

- Choose Tools > Action Wizard.
- From the Action List, click Make Accessible.
- Select the files that you want to apply the Make Accessible action to.
- Click Start.
- Follow the prompts to complete the Make Accessible action.

SPOILER ALERT: Based on my experience, I still recommend that you start with a fully accessible document (e.g. Word) and convert it to PDF. It's more efficient and a better use of your time than applying accessibility to a non-accessible --- or marginally accessible --- PDF.

Slide 46



Show the Tag Pane

IMAGE: Screen capture

- Select the drop-down menu for **View**
- Select the **Show / Hide** option
- Select the **Navigation Panes** option
- Select the **Tags** option








Artifacts

IMAGE: Archeological artifacts

In PDFs, an artifact is a purely decorative image that can be and should be ignored by screen reading software.

Artifact Examples

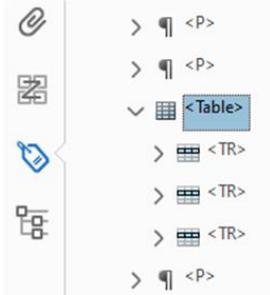
-  Purely decorative images
-  Redundant Company Logos and Government Seals
-  Table borders incorrectly identified as images by OCR in scanned PDFs
-  Fancy bullet points (like the ones here.)
-  Headers and Footers (when exporting from MSO documents)

Artifact Examples

- Purely decorative images
- Redundant Company Logos and Government Seals
- Fancy bullet points
- Table borders incorrectly identified as images by OCR in scanned PDFs

Ask whether including descriptions would aid in making an equitable experience?

Remove the Table tags for the layout tables



The screenshot shows the Adobe Acrobat 2017 interface. On the left is a vertical toolbar with icons for 'Tools', 'Edit PDF', 'Tag', and 'Structure'. The 'Tag' icon is selected. The main area displays a tag tree with the following structure:

- > ¶ <P>
- > ¶ <P>
- ✓ [Table icon] <Table>
- > [Table icon] <TR>
- > [Table icon] <TR>
- > [Table icon] <TR>
- > ¶ <P>

The '<Table>' tag is highlighted with a blue selection box.

In the tab pane, select the <Table> tag and delete it.

The page layout will remain the same --- including the table content --- but assistive technology will not treat it as a table.

This is like the "role='presentation'" technique in HTML but applied to PDF.

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Remove Layout Tables in Adobe Acrobat 2017

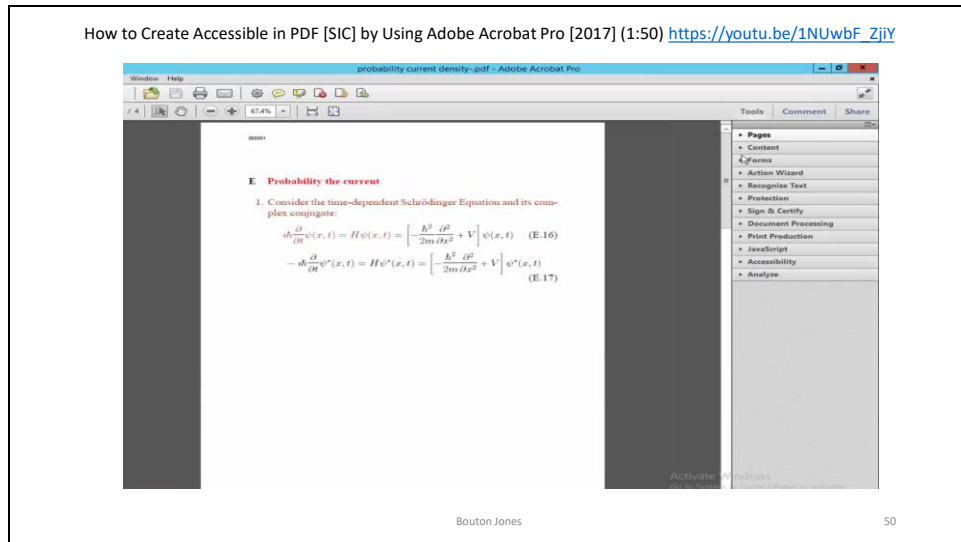
Remove a Table

- Select Tools
- Select Edit PDF
- Select Tag to see the tag tree
- Select the table with a right click
- Select the Delete Tag option from the context menu

The challenge here is to identify the correct tag. They are not well labeled and it's hard to identify which item in the document they correspond to.

IMAGE: Screen Capture showing how to remove a table tag from the tag tree.

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Acrobat A11y Demo (VIDEO)

How to Create Accessible in PDF [SIC] by Using Adobe Acrobat Pro [2017] (1:50)
CITE: https://youtu.be/1NUwbF_ZjiY

In this video, PDF Tutorial: How to Create Accessible in pdf by using adobe acrobat pro - 2017. Go to the tool menu and click the Action Wizard and Click Create Accessible

00:00 In this video, PDF Tutorial: How to Create Accessible in pdf by using adobe acrobat pro

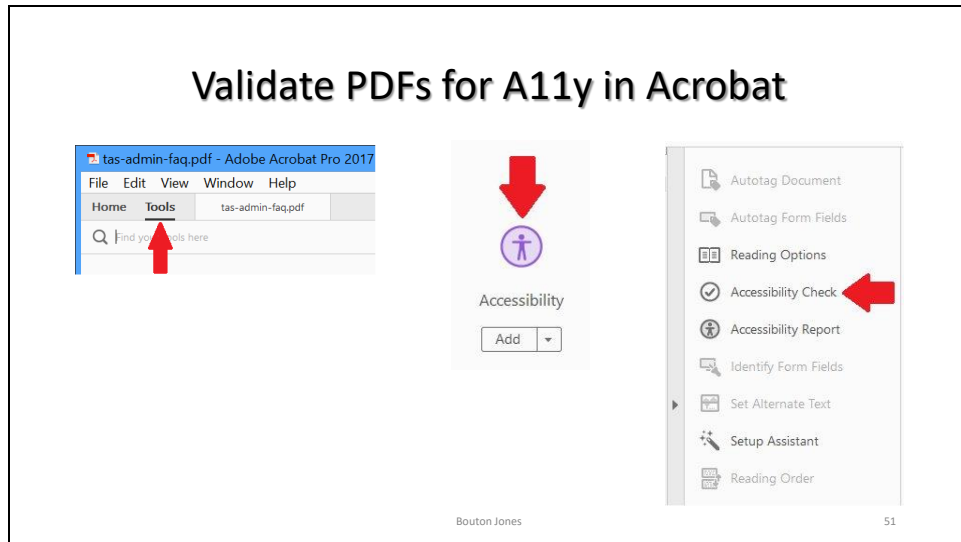
00:01 Go to the tool menu and click the Action Wizard and Click Create Accessibly

00:11 select the Add Document Description and click ok and select destination

00:22 fill the information

01:00 now your accessibility is created

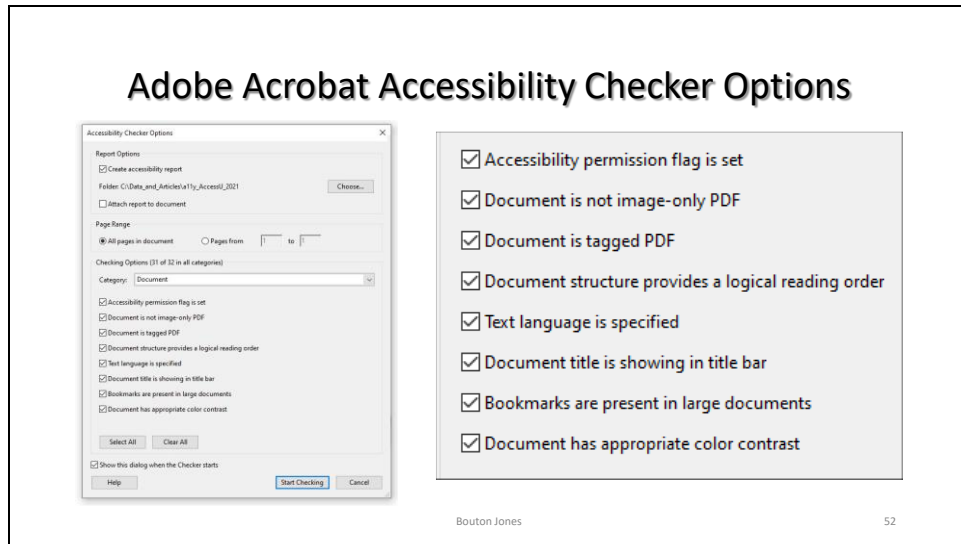
01:40 Please Subscribe My channel Thank you for watching



Validate PDFs for A11y in Acrobat

- Choose Tools > Accessibility.
- In the secondary toolbar, click Full Check.
- In the Report Options section, select options for how you want to view the results.
- Select one or more of the Checking Options.
- Click Start Checking. The results are displayed in the Accessibility Checker panel on the left.

Spoiler Alert: Don't rely solely on automated reports to check a11y. Manual testing is obligatory.



Adobe Acrobat Accessibility Checker Options

IMAGE: Adobe's Accessibility Check Options

Slide 53

Accessibility Report

Filename:
cfdocument_(pdf).pdf

Checking Option:
Adobe PDF

Use this report to identify potential accessibility errors. Click on the link for each error to highlight the location of the error in the PDF file.

Report Contents

- [Detailed Report](#)
- [Summary](#)
- [Hints for Repair](#)
- [Disclaimer](#)

Detailed Report

Page Content Errors

Page 1: [Next Page](#)

- 2 image(s) with no alternate text ([How to Add Alternate Text](#))
 - No alternate text
 - No alternate text
- All of the text on this page lacks a language specification ([How to Add Language Attributes](#))

Page 2: [Next Page](#) | [Prev Page](#)

- All of the text on this page lacks a language specification ([How to Add Language Attributes](#))

Summary

The checker found problems which may prevent the document from being fully accessible.

- This document is not tagged; the reading order of the contents may be incorrect. ([How to Add Tags](#))
- 2 image(s) with no alternate text ([How to Add Alternate Text](#))
- All of the text in this document lacks a language specification ([How to Add Language Attributes](#))

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Adobe Acrobat Accessibility Report

IMAGE: Screen capture of a Adobe Acrobat Accessibility Report

PDF Accessibility Checker (PAC)

Testing Criteria

<p>✓ Document is marked as tagged</p> <p>✓ Document Title available</p> <p>✓ Document Language defined</p> <p>✓ Permitted Security Settings</p> <p>✓ Tab follows Tag-Structure</p> <p>✓ Consistent Heading Structure</p> <p>⚠ Bookmarks available</p>	<p>✓ Accessible Font Encodings</p> <p>✓ Content completely tagged</p> <p>⚠ Logical Reading Order</p> <p>✓ Alternative Text available</p> <p>✗ Correct Syntax of Tags / Rolls</p> <p>⚠ Sufficient contrast for Text</p> <p>✓ Spaces existent</p>
---	---

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PDF Accessibility Checker (PAC)

PAC's 14 Testing Criteria:

- Document is marked as tagged
- Document Title available
- Document Language defined
- Accessible Security Settings
- Tab follows Tag-Structure
- Consistent Heading Structure
- Bookmarks available
- Accessible Font Encodings
- Content completely tagged
- Logical Reading Order
- Alternative Text available
- Correct Syntax of Tags / Rolls
- Sufficient contrast for Text
- Spaces existent

Adobe Acrobat UI for Remediation

- I think the UI for remediation in Adobe Acrobat is awful, but I've recently seen improvements.
- Acrobat has multiple panes ("modes") for modifying documents. E.G. edit tags, re-order tags, edit PDF, etc., It's cumbersome and confusing to move between them.
- Performing certain functions are involved. It takes 5 clicks to perform OCR!



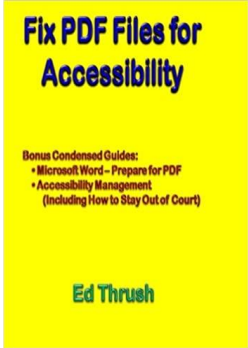
Adobe Acrobat UI for Remediation

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Acrobat has multiple panes ("modes") for modifying documents. E.G. edit tags, re-order tags, edit PDF, etc., It's cumbersome and confusing to move between them.

Performing certain functions are involved. It takes 5 clicks to perform OCR!

A Book about PDF Remediation



Fix PDF Files for Accessibility: The Easy and Ultimate Guide to Applying Section 508 and WCAG 2.0 to PDF Files

1st Edition
by Ed Thrush
Paperback : 148 pages
ISBN-10 : 1514608936
ISBN-13 : 978-1514608937

<https://www.amazon.com/Fix-PDF-Files-Accessibility-Ultimate/dp/1514608936/>

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A Book about PDF Remediation

Fix PDF Files for Accessibility: The Easy and Ultimate Guide to Applying Section 508 and WCAG 2.0 to PDF Files

1st Edition

by Ed Thrush

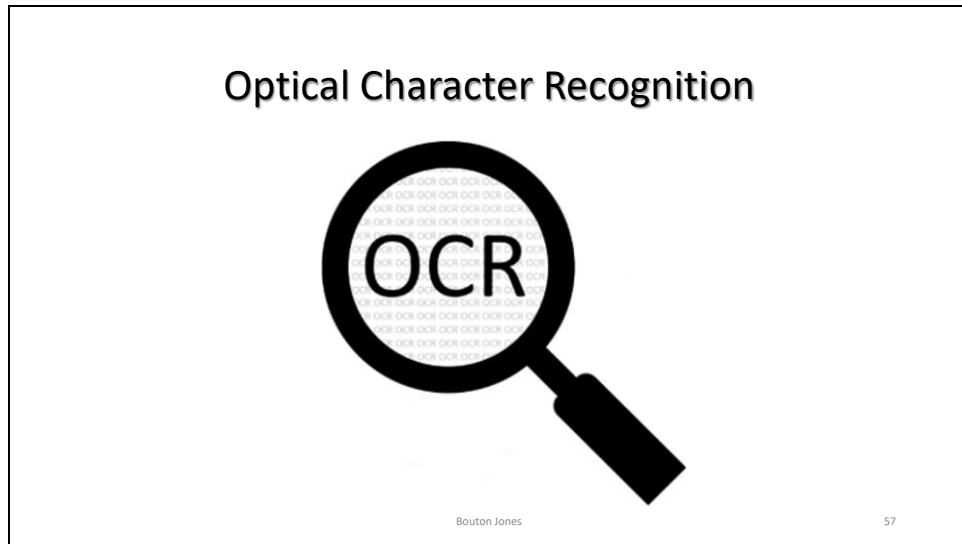
Paperback : 148 pages

ISBN-10 : 1514608936

ISBN-13 : 978-1514608937

<https://www.amazon.com/Fix-PDF-Files-Accessibility-Ultimate/dp/1514608936/>

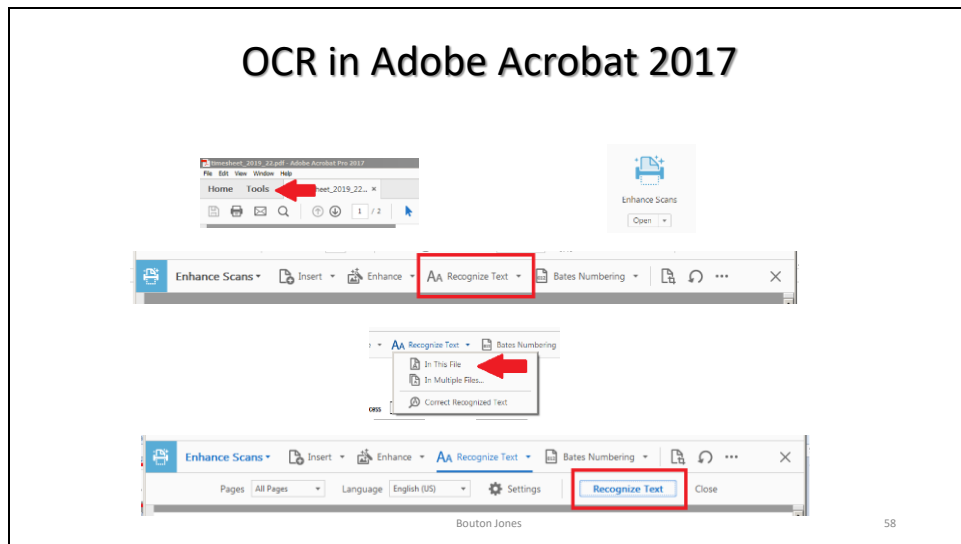
AMAZON.com DESCRIPTION: This book provides the easiest way to get to the required accessibility of a PDF file. It is rare for any PDF to come out perfect for accessibility and as a result almost all PDF files will need some type of work. In addition to the easy nuts and bolts methods to make PDF files work for the disabled, there are also condensed methods for preparation of documents commonly converted to PDF. In addition, there are instructions for managers and even contract language. You can get a legal history or technical lesson elsewhere, this book is for getting to work fixing PDF files for accessibility.



Optical Character Recognition (OCR) [Title Slide]

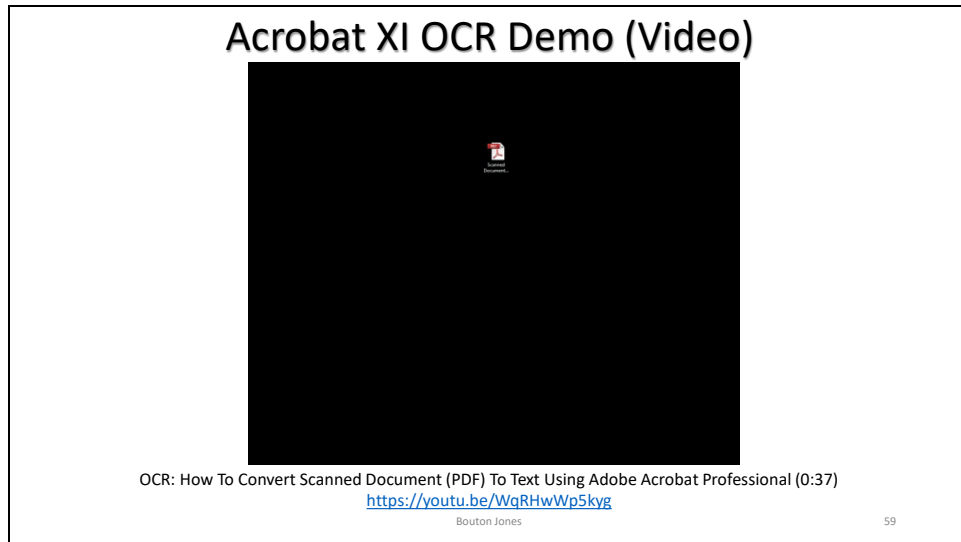
Optical character recognition or optical character reader is the electronic or mechanical conversion of images of typed, handwritten or printed text into machine-encoded text, whether from a scanned document, a photo of a document, a scene-photo or from subtitle text superimposed on an image.

CITE: Wikipedia



OCR Steps in Adobe Acrobat 2017

- Select the Tools tab
- Select the Enhance Scans icon
- Select the Recognize Text menu
- Select the In This File Option
- Select the Recognize Text button



OCR Demo (Video)

OCR: How To Convert Scanned Document (PDF) To Text Using Adobe Acrobat Professional (:37)

This video has no narration, transcript, or close captioning.

In this video a PDF is displayed inside Adobe Acrobat. The user tries to select the text. But the PDF is image only so the text cannot be selected. The user runs OCR on the entire PDF. The pages are de-skewed (i.e. straightened) The text inside the images are converted into real text. They appear to retain the original fancy font face.

CITE: <https://youtu.be/WqRHwWp5kyg>

Slide 60

How Reliable is the OCR?

Bouton Jones

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How Reliable is the OCR?

Three Ways to Check the OCR Accuracy

1. Compare the visible text to what a screen reader finds.
2. Copy and paste the newly editable text into a text document.
3. Change the font face --- of the *editable text* --- throughout the revised document. (Later you can change it back to the fonts closest to the original document's fonts.)

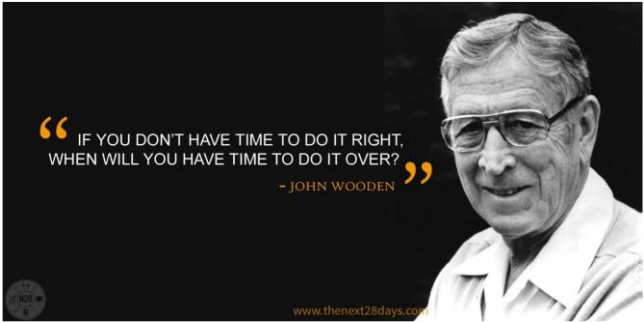
Three Ways to Check the OCR Accuracy

- Compare the visible text to what a screen reader finds.
- Copy and paste the newly editable text into a text document.
- Change the font face --- of the editable text --- throughout the revised document. (Later you can change it back to the fonts closest to the original document's fonts.)

More About OCR

The “PDF A11y 102” session includes more about OCR.

My Take-away



It's better to export a fully accessible Office document into PDF than to remediate in-accessible PDFs.

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My Take Away

I think it's better to export a fully accessible Office document into PDF than to remediate in-accessible PDFs. It's faster, easier, and more reliable.

IMAGE: John Wooden face and quote.

"If you don't have time to do it right. When will you have time to do it over?"
- John Wooden

Meaning here:

- You're not going to accidentally make something accessible.
- Accessibility is not expensive if done right
- Accessibility is best incorporated at every step of the development process. Accessibility is not something you add at the end.

But wait! I can hear what someone is thinking ...



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But wait! I can hear what someone is thinking ...

IMAGE: Doctor X of the X-men reading minds.

“Hey, Mr. Smarty-pants! What if the original source document *doesn't* exist? What then?!?”

Is that a Fact or assumption?

What will remediation entail?

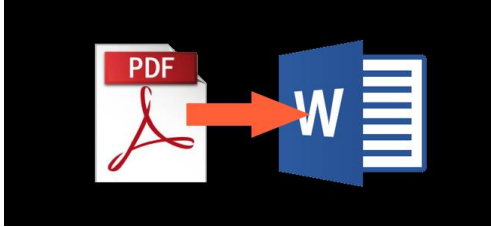
How long will remediation take?

Can the source document be reproduced?

“Hey, Mr. Smarty-pants! What if the original source document doesn't exist? What then?!?”

- Is that a Fact or assumption?
- What will remediation entail?
- How long will remediation take?
- Can the source document be reproduced?

Convert PDF to Microsoft Word



- Acrobat DC (best solution but also the most expensive)
- Adobe Reader (\$12.99 per month for this functionality)
- Microsoft Word (can lead to formatting issues)
- Google Docs

CITE: <https://www.howtogeek.com/360499/how-to-convert-a-pdf-to-a-microsoft-word-document/>

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Convert PDFs to Microsoft Word

If at all possible: Convert PDFs to MS Word, make the Word documents accessible, and then convert to PDF.

From "How to Convert a PDF to a Microsoft Word Document" by HAYLEY MILLIMAN
AUGUST 3, 2018, 10:24AM EDT

- Acrobat DC (best but expensive)
- Adobe Reader (\$12.99 per month)
- Microsoft Word
- Google Docs

“PDFs are often used when distributing documents so that they’re seen the same way by all parties. Because they’re designed in this way, they can be quite difficult to edit. You may want to convert your PDF to a Word document so that you can make changes to your text more easily.”

“Adobe’s own Acrobat DC and Acrobat Reader DC both offer an easy way to convert PDF files to Word documents. The bad news is that it ain’t free. The full Acrobat DC has a standard version (Windows only) that runs \$12.99 per month and a pro version

(Windows and Mac) that runs \$14.99 per month. And both require an annual commitment. Pretty overkill if all you need to do is convert a PDF to Word format once in a while. But if you already have Acrobat DC, then you should use that convert your PDFs.”

“Acrobat Reader DC, on the other hand is free, but you’ll need to pony up a \$1.99 per month fee if you want it to be able to convert PDFs to other formats, like Word. If it’s something you need to do regularly, that fee is probably worth it because using Acrobat is the most reliable way to change your PDFs to Word documents, since it tends to maintain formatting pretty well.”

“You can also convert your PDF to a Word document using just Microsoft Word. Converting in Word often leads to style and formatting issues, so it’s not always the most reliable method. However, it certainly works well enough for simple documents or when you just need to get stuff into an editable format.”

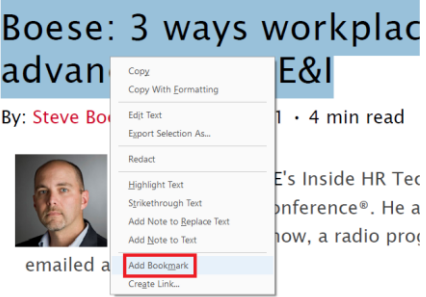
“Google Docs provides another safe and reliable way to convert your PDF to a Word document.”

CITE: <https://www.howtogeek.com/360499/how-to-convert-a-pdf-to-a-microsoft-word-document/>

Additional Considerations

- Bookmarks
- Reflow
- Liquid Mode
- Fillable Forms
- Redaction

End User Added Bookmarks



The screenshot shows a PDF document with the following text: "Boese: 3 ways workplace advanced E&I", "By: Steve Boese", "1 • 4 min read", "E's Inside HR Tech Conference®. He a", "ow, a radio pro", and "emailed a". A context menu is open over the text "E&I", with the "Add Bookmark" option highlighted in red.

- Bookmarks are links in the navigation panel of PDFs. They allow jumping to specified topics.
- End users can create their own bookmarks in existing PDFs.

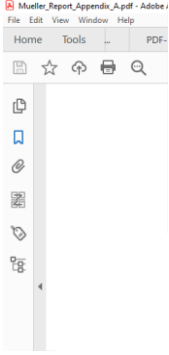
Bouton Jones 68

Bookmarks

Bookmarks are links in the navigation panel of PDFs. They allow jumping to the specified topic.

End users can create their own bookmarks in PDFs.

A11y Guidelines for Bookmarks



- The TOCs of Word documents can be exported as bookmarks in PDFs. (And those TOCs are based on the headings.)
- The Acrobat checker gives an error if bookmarks are not present in a document longer than 20 pages.
- **Some A11y professionals advise:** if you use Bookmarks, they should mirror headings.

Bouton Jones 69

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HHS.gov U.S. Department of Health & Human Services

PDF Properties and General Checks

Issue Title	Issue Description	Remediation Suggestion
Bookmarks Unavailable for Document >=10 pages	The document contains at least 10 pages and does not contain proper bookmarks. This issue is a violation of section 508 and WCAG 2.0 Success Criterion 2.4.5 .	Add bookmarks for major divisions of the document. Recommend creating based on the heading structure or Table of Contents if one exists. For assistance see: W3 PDF Technique #2 Adobe Bookmarks
Bookmarks are inaccurate	There are multiple bookmarks to the same place, incorrect titles/names, or locations are out of order. This issue is a violation of section 508 and WCAG 2.0 Success Criterion 2.4.5 .	Add, remove, or rearrange bookmarks. Recommend creating based on the heading structure or Table of Contents if one exists. For assistance see: W3 PDF Technique #2 Adobe Bookmarks

URL: <https://www.hhs.gov/web/section-508/making-files-accessible/pdf-required/index.html>

Thanks to David Comeau for referring me to this page

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SCREEN CAPTURE: Sections of a table from the “Required Fixes for PDF Files” page on the HHS.gov website. It consists of two rows and three columns

First Row

Issue Title: Bookmarks Unavailable for Document >=10 pages

Issue Description: The document contains at least 10 pages and does not contain proper bookmarks. This issue is a violation of section 508 and WCAG 2.0 Success Criterion 2.4.5. <<http://www.w3.org/TR/UNDERSTANDING-WCAG20/navigation-mechanisms-mult-loc.html>>

Remediation Suggestion: Add bookmarks for major divisions of the document. Recommend creating based on the heading structure or Table of Contents if one exists. For assistance see: W3 PDF Technique #2 <<http://www.w3.org/TR/2015/NOTE-WCAG20-TECHS-20150226/PDF2>> Adobe Bookmark <<https://helpx.adobe.com/acrobat/using/create-verify-pdf-accessibility.html?trackingid=KACNN#Bookmarks>>

Second Row

Issue Title: Bookmarks are inaccurate

Issue Description: There are multiple bookmarks to the same place, incorrect titles/names, or locations are out of order. This issue is a violation of section 508 and WCAG 2.0 Success Criterion 2.4.5. <<http://www.w3.org/TR/UNDERSTANDING-WCAG20/navigation-mechanisms-mult-loc.html>>

Remediation Suggestion: Add, remove, or rearrange bookmarks. Recommend creating based on the heading structure or Table of Contents if one exists. For assistance see: W3 PDF Technique #2 <<http://www.w3.org/TR/2015/NOTE-WCAG20-TECHS-20150226/PDF2>>
Adobe Bookmarks <<https://helpx.adobe.com/acrobat/using/create-verify-pdf-accessibility.html?trackingid=KACNN#Bookmarks>>

URL: <https://www.hhs.gov/web/section-508/making-files-accessible/pdf-required/index.html> <https://www.hhs.gov/web/section-508/making-files-accessible/pdf-required/index.html>

WCAG Success Criterion 2.4.5

Multiple Ways: More than one way is available to locate a Web page within a set of Web pages except where the Web Page is the result of, or a step in, a process. (Level AA)

Intent of Success Criterion: The intent of this Success Criterion is to make it possible for users to locate content in a manner that best meets their needs. Users may find one technique easier or more comprehensible to use than another.

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PDF2 (WCAG 2.0 Technique): Creating bookmarks in PDF documents

“The intent of this technique is to make it possible for users to locate content using bookmarks (outline entries in an Outline dictionary) in long documents.

“A person with cognitive disabilities may prefer a hierarchical outline that provides an overview of the document rather than reading and traversing through many pages. This is also a conventional means of navigating a document that benefits all users.”

URL: <https://www.w3.org/TR/2016/NOTE-WCAG20-TECHS-20161007/PDF2>

PDF2 (WCAG 2.0 Technique): Creating bookmarks in PDF documents

The intent of this technique is to make it possible for users to locate content using bookmarks (outline entries in an Outline dictionary) in long documents.

A person with cognitive disabilities may prefer a hierarchical outline that provides an overview of the document rather than reading and traversing through many pages. This is also a conventional means of navigating a document that benefits all users.

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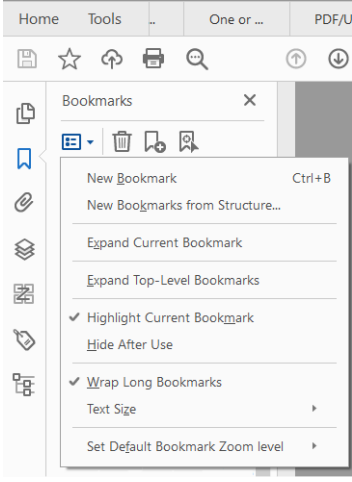
My Minority Opinion on Bookmarks

- The Acrobat checker gives an error if bookmarks are not present in a document longer than 20 pages.
- Section 508 requires Federal agencies to include bookmarks in a PDF if the document is ten or more pages long.
- WCAG allows for bookmarks as one technique for Success Criterion 2.4.5

My Conclusion for Bookmarks

- The Acrobat checker gives an error if bookmarks are not present in a document longer than 20 pages.
- Section 508 requires Federal agencies to include bookmarks in PDF if the document is ten or more pages long
- WCAG allows for bookmarks as one technique for Success Criterion 2.4.5

Slide 74



The screenshot shows the Adobe Acrobat Pro DC interface. The 'Bookmarks' panel is open, displaying a list of options: 'New Bookmark' (with a keyboard shortcut 'Ctrl+B'), 'New Bookmarks from Structure...', 'Expand Current Bookmark', 'Expand Top-Level Bookmarks', 'Highlight Current Bookmark' (checked), 'Hide After Use', 'Wrap Long Bookmarks' (checked), 'Text Size' (with a dropdown arrow), and 'Set Default Bookmark Zoom level' (with a dropdown arrow). The 'New Bookmarks from Structure...' option is highlighted, indicating it is the selected action.

How to add bookmarks based on a document's structure via Adobe Acrobat Pro DC:

1. Select Bookmarks icon on the Accessibility Checker panel
2. Select the Options icon
3. Select New Bookmarks from Structure
4. In the Structure Elements dialog box, select the element(s) that you want to use as bookmarks.
5. Click OK.

CITE: <https://accessiblewebsiteservices.com/accessible-pdfs-when-bookmarks-are-required/>

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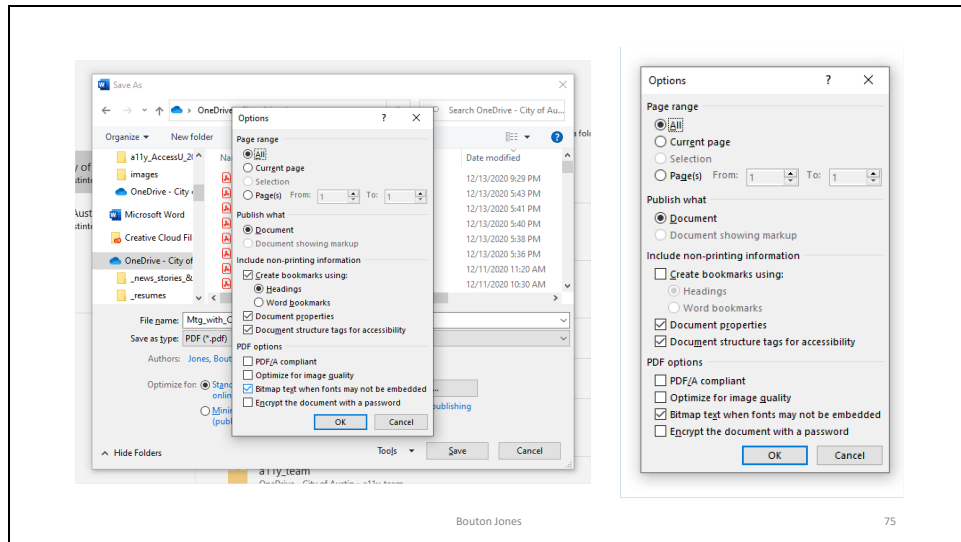
How Do You Use Word Headings for Bookmarks?

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3. Select New Bookmarks from Structure
4. In the Structure Elements dialog box, select the element(s) that you want to use as bookmarks.
5. Click OK.

CITE: <https://accessiblewebsiteservices.com/accessible-pdfs-when-bookmarks-are-required/>

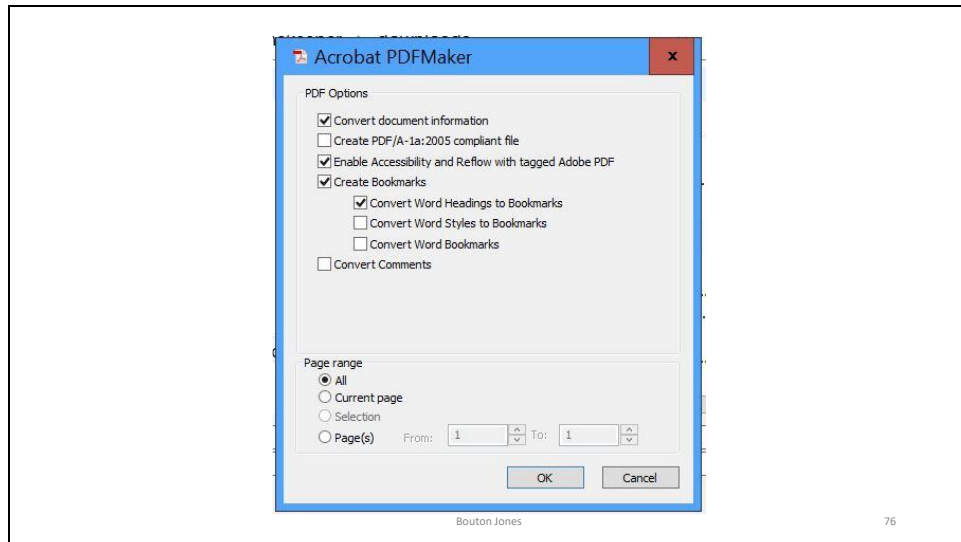
Slide 75



Create Bookmarks Based on Heading in Word

IMAGE: Screen Capture of the Options window for the Save As window.

Slide 76



Convert Word Headings to Bookmarks Using Acrobat PDFMaker

About Fillable Forms


- Make sure the labels and names of the input fields are correct
- Make sure the tab order of the input fields is correct
 - Form fields are listed in the order they were added.
- The tool tips should match the labels
- Date field tool tips should contain a text string showing the correct date format (e.g. "mm/dd/yyyy.")

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About Redaction

- Why redaction?
- Don't go old school. Redact *electronically*.
- Redact electronically the *right* way.
- Return to Document View mode before saving a redacted document.



Bouton Jones .78


About Redaction

IMAGE: Haben Girma, an American disability rights advocate, and the first deafblind graduate of Harvard Law School.

- * Lawyers and paralegals might be blind.
- * Don't manually redact hard copies and scan them. Redact electronically.
- * Redact electronically the right way. Don't make the same mistake as the lawyers for Paul Manafort and former Illinois Governor Rod Blagojevich.
- * Save your changes: Return to Document View mode before saving a redacted document. Close the other modes.

Final Considerations

- Do you truly need to use a PDF (instead of a web page) to show attestation? (*IANAL*.)
- Use Accessible color combinations and color contrasts.
- Syntax and Language: KISS.
- Manually Test A11y.
- Provide accessible MSO templates for your organization's content providers' use.
- Use WCAG *and* PDF/UA for guidance



Bouton Jones

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Other Considerations

- Do you truly need to show attestation by using a PDF instead of web page? *IANAL*. Check with your lawyer(s).
- Apply WCAG's accessible color contrast guidelines.
- Syntax and language: KISS.
 - Write in plain language. Choose words that are common and easy to understand.
 - Use clear, short sentences and paragraphs. Avoid run-on sentences.
 - Your content should be written in the active voice instead of the passive voice. (Or more correctly: Write your content in the active voice instead of the passive voice.)
 - Avoid using acronyms, abbreviations, and text messaging syntax that would sound strange if read by a screen reader or that could be confusing to some readers. (e.g. "Tunatexas.gov")
 - Limit your use of hashtags. But when you do, use camel case (e.g. #CityOfArlan, #TunaTexas)
 - "It [Plain Language] is easily searchable and will often gain you a better SEO ranking. The words that you use in your copy should reflect the words people enter in search engines." - Hoa Loranger "Plain Language Is for Everyone, Even Experts" <https://www.nngroup.com/articles/plain-language-experts/>
 - When you use an acronym for the first time in an article or web page, use the long name first (spell it out) and follow that with the acronym in parenthesis. For example: "The Human Resource Department (HRD) has the finest ColdFusion

development team in the City of Austin. HRD has long been recognized for its IT excellence."

- Microsoft Word's built-in grammar checker, Grammarly, and Hemingway
- Manually test A11y. Recruit people with disabilities (e.g. blind users, people with limited vision, people who are color blind, and people with dyslexia.)
- Provide accessible Microsoft Office document templates for your organization's content providers use.
- Follow WCAG *and* PDF/UA for guidance (with a preference for WCAG.)

Summary

- Only use PDFs when they are the best option.
- It's better to remediate and export a source document to PDF than to remediate an inaccessible PDF.
- Check the accessibility of your source documents using automated *and* manual testing.
- Never print to PDF. Always export to --- or save as --- PDF.
- If you must scan to PDF, then perform OCR and remediate.
- Check the accuracy of OCR and correct when necessary.
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Next: PDF A11y 201

- The PDF/UA Guidelines
- The Matterhorn Protocol
- More on OCR Accuracy
- Embedding Fonts in Word and PDFs
- What are the Base 14 fonts?
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- When are "article threads" an issue?
- What is XFA and when is it a problem?

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Slide 82



Any Questions?

Slide 83



Thank You. This concludes this session.

Hacking Redacted PDFs

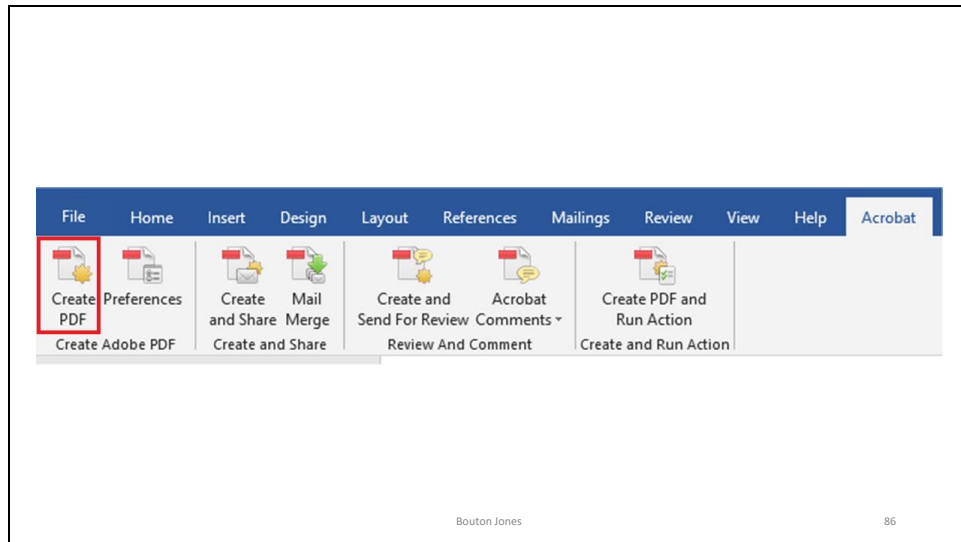
[Open the Slides for "Hacking Redacted PDFs"](#)

Reflow

- Can you easily read your PDF on a mobile phone? Or must you resize the PDF and scroll horizontally and vertically in order to read all the content?
- Have you enabled reflow (for low vision users) in your PDF? And is your PDF optimized for reflow?
- See VIDEO: "How to make PDFs accessible for emergency communications" (September 11, 2020) from Deque Systems (59:11) at <https://www.youtube.com/watch?v=TI5vQeTLX4M> for more on this.

Reflow

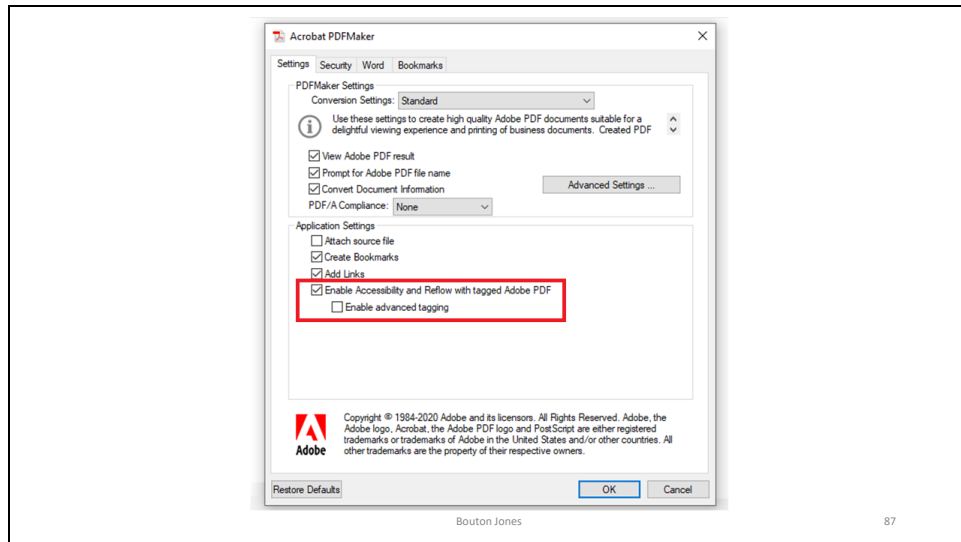
- Can you easily read your PDF on a smart phone? Or must you resize the PDF and scroll horizontally and vertically in order to read all the content?
- Have you enabled reflow (for low vision users) in your PDF? Is your PDF optimized for reflow?
- See VIDEO: "How to make PDFs accessible for emergency communications" from Deque Systems (59:11) at <https://www.youtube.com/watch?v=TI5vQeTLX4M> for more on this.



Enable Reflow from Word (Step 1 & 2)

IMAGE: Acrobat ribbon in Word with Create PDF highlighted

Slide 87



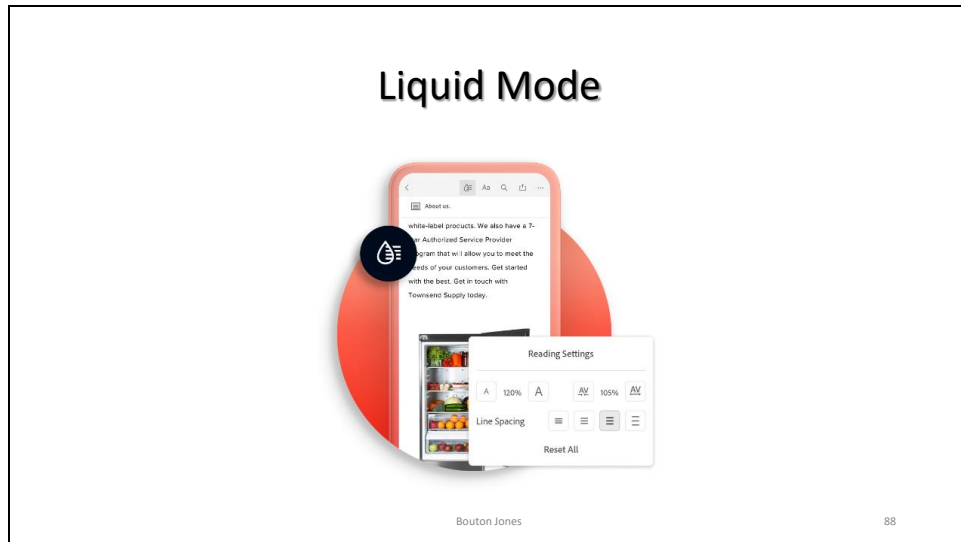
Enable Reflow from Word (Step 3 & 4)

IMAGE: Screen capture of the Acrobat PDFMaker window.

In the following dialog box, select the Options button:

option button for saving as a pdf

Make sure the box is checked for “Enable Accessibility and Reflow with tagged Adobe PDF”



Liquid Mode


"Liquid Mode lets you effortlessly read PDFs on phones, tablets, and Chromebooks — no pinching and zooming necessary. You can maximize your comfort with readability controls to adjust the default font size, character spacing, and line spacing." (CITE: <https://acrobat.adobe.com/us/en/mobile/acrobat-reader.html> viewed on 3/26/2019)

Confirm previous slide with example

Before and After Removing Table Tags

Other Checkers

Bouton clicked the "End" button again!



DOH!

Previous slide

Bouton Jones 92

The image shows a cartoon character with yellow skin and a white shirt sitting at a desk with a computer. The character has a speech bubble that says "DOH!" and is holding his head with one hand. The computer consists of a monitor, a keyboard, and a base unit. The scene is framed by a black border. Below the cartoon is a blue button with a white left-pointing triangle and the text "Previous slide". At the bottom of the slide, the name "Bouton Jones" and the number "92" are visible.

Click this button to return to the previous slide.