Using WCAG 2.x Techniques for PDFs

Karen McCall, M.Ed. Karlen Communications

Copyright 2024



Table of Contents

Using WCAG 2.x Techniques for PDFs (Slide 1)	5
Grouping the WCAG PDF Techniques (Slide 2)	5
The Starting Point (Slide 3)	5
PDF 7: Performing OCR (Optical character Recognition) to provide access to (Slide 4)	PDF content. 5
PDF 7: Scanned PDF Forms (Slide 5)	5
PDF 7: Scanned PDF - Adobe Acrobat Pro DC (Slide 6)	6
Samples of Misrecognized Text in Acrobat (Slide 7)	6
PDF 7: Scanned PDF - Foxit PDF Editor (Slide 8)	7
Samples of Misrecognized Text Foxit PDF Editor (Slide 9)	7
ABBYY FineReader – 1 (Slide 10)	
ABBYY FineReader – 2 (Slide 11)	
Sorting Through the PDF Techniques (Slide 12)	9
Typical Tags in PDFs (Slide 13)	9
Start with a Tagged PDF (Slide 14)	9
Source Content and Tagged PDFs (Slide 15)	9
PDF 18: Document Title – Microsoft 365 (Slide 16)	
PDF 18: Document Title – Adobe Acrobat (Slide 17)	
PDF 18: Document Title – Foxit PDF Editor (Slide 18)	
PDF 9: Headings – Microsoft 365 (Slide 19)	
PDF 9 Headings: Acrobat and Foxit (Slide 20)	
PDF 2: Bookmarks (Slide 21	
PDF 2: Bookmarks – Microsoft 365 (Slide 22)	
PDF 2: Bookmarks – Adobe Acrobat Pro DC (Slide 23)	
PDF 2: Bookmarks – Foxit PDF Editor (Slide 24)	
PDF 1: Alternate Text – Microsoft 365 (Slide 25)	
PDF 1: Alternate Text – Adobe Acrobat Pro DC (Slide 26)	
PDF 1: Alternate Text – Foxit PDF Editor (Slide 27)	
PDF 4: Decorative Images – Microsoft 365 (Slide 28)	
PDF 4: Decorative Images – Adobe Acrobat (Slide 29)	

PDF 4: Decorative Images – Foxit PDF Editor (Slide 30)	
PDF 8: Abbreviations – Adobe Acrobat Pro DC (Slide 31)	
PDF 8: Abbreviations – Foxit PDF Editor (Slide 32)	
PDF 6: Correct Table Tagging (Slide 33)	
PDF 20: Table Editor (Slide 34)	
PDF 20: Table Editor – Adobe Acrobat Pro DC (Slide 35)	
PDF 20: Table Editor – Foxit PDF Editor (Slide 36)	
PDF 21: Correct List Tagging (Slide 37)	
Important Note About Tags (Slide 38)	
Table Spanning Two Pages (Slide 39)	
PDF 11 and 13: Links (Slide 40)	
Language and Language Changes (Slide 41)	
PDF 16 and 19: Language (Slide 42)	
PDF 16: Language of Document (Slide 43)	
PDF 19: Changes in Language (Slide 43)	
WCAG Techniques for PDF Forms (Slide 44)	
PDF Techniques for Forms (Slide 45)	
PDF 12: Name, Role Adobe Acrobat -1 (Slide 46)	
PDF 12: Name, Role Adobe Acrobat – 2 (Slide 47)	
PDF 12: Name, Role Foxit PDF Editor – 1 (Slide)	
PDF 12: Name, Role Foxit PDF Editor – 2 (Slide 50)	
PDF 10 Labels (Slide 51)	
PDF 23 Keyboard (Slide 52)	
PDF 5: Required Fields (Slide 53)	
PDF 15: Submit Button (Slide 54)	
PDF 22: Error Messages (Slide 55)	
PDF 23: Interactive Forms (Slide 56)	
Page Headers, Footers and Page Numbers (Slide 57)	
PDF 14: Page Headers and Footers (Slide 58)	
PDF 17: Page Numbers (Slide 59)	
PDF 17: Page Labels in PDFs (slide 60)	
Tab Order and Logical Reading Order (Slide 61)	

PDF 3: Tab Order – 1 (Slide 62)	44
PDF 3: Tab Order – 2 (Slide 63)	44
PDF 3: Logical Reading Order (Slide 64)	44
PDF 3: Sample Multilingual Document (Slide 65)	45
PDF 3: Logical Reading Order – Tri-Fold Brochure (Slide 66)	45
Resources (Slide 67)	45
WCAG PDF Techniques in Order (Slide 68)	46
Additional 2.1 Techniques (Slide 69)	46
Additional 2.2 Techniques (Slide 70)	47
Contact Information (Slide 71)	47

Using WCAG 2.x Techniques for PDFs (Slide 1)

Karen McCall, M.Ed. Karlen Communications Copyright 2024

Grouping the WCAG PDF Techniques (Slide 2)

The PDF Techniques for WCAG 2.x have been "updated" for each version of the WCAG.

They are laid out in the order in which the success criteria appear in the WCAG.

This means that techniques that apply to forms, for example, are scattered throughout the techniques.

This presentation attempts to group them more logically.

We'll also add the 2.1 and 2.2 success criteria where they apply to form controls.

Web Content Accessibility Guidelines (WCAG) 2.1 (w3.org)

The Starting Point (Slide 3)

PDF 7: Performing OCR (Optical character Recognition) to provide access to PDF content. (Slide 4)

PDF 7: Scanned PDFs – Avoid "Actual Text"

The text of this technique states that you are providing "Actual Text".

"Actual Text" is an attribute on a <Figure> Tag and will not provide an accessible PDF if you are working on a scanned graphic of a document.

Actual Text cannot have Headings, lists, table, figures, or other structural elements. The Actual Text editor is a plain text editor.

The PDF should provide access to the content of the PDF using structural elements. These structural elements include paragraphs, lists, graphics, tables, and Headings not available when the "Actual Text" attribute is used.

PDF 7: Scanned PDF Forms (Slide 5)

The contents of the form template must be tagged:

Everything that needs a Tag must have a Tag.

The Tags must be correct for the type of content.

The Tags must be in the logical reading order for the document.

Page 5 of 47

Perform OCR (Optical Character Recognition) or Text Recognition on the scanned form.

I find that the OCR tools in either Adobe Acrobat Pro DC or Foxit PDF Editor are any good.

I use ABBYY Fine Reader. An alternative is Tungsten OmniPage Pro.

Any scanned PDF must go through OCR or Text Recognition before it is tagged!

PDF 7: Scanned PDF - Adobe Acrobat Pro DC (Slide 6)

Often, you'll get words with no spaces between them, or words with spaces between the characters of each word.

Until the PDF is tagged, you don't know this.

If you ask Acrobat for "suspect text", you'll get a "no errors found" message despite the two types of mis-recognition above or characters misrecognized as "graphics".

Samples of Misrecognized Text in Acrobat (Slide 7)

Figure 1 Paragraph where all the words are together with no spaces between them.





Figure 2 Sample scanned document after text recognition showing spaces between characters in words

PDF 7: Scanned PDF - Foxit PDF Editor (Slide 8)

I couldn't get any tagged content using the Foxit PDF Editor Text Recognition Tool.

I tried every combination I could think of when it found "suspect text" but the result was always a PDF with empty <P> Tags.

Samples of Misrecognized Text Foxit PDF Editor (Slide 9)

Figure 3 OCR Suspects dialog showing "Check All" checked and buttons active (Foxit PDF Editor).

OCR Suspects	×
Original Document	OCR text
vii	vii
Check All	
✓ Page 1 ✓ 1990 ✓ <mark>vii</mark>	
	2
	<u>N</u> ot Text <u>A</u> ccept

Figure 4 Tags Tree after Text Recognition (Foxit PDF Editor).



ABBYY FineReader - 1 (Slide 10)

Figure 5 OCR Project including OCR Editor in ABBYY FineReader.



ABBYY FineReader – 2 (Slide 11)

Figure 6 File menu, Save As options in ABBY FineReader.



Sorting Through the PDF Techniques (Slide 12)

Some elements of PDF are not present in HTML. For example, Footnotes, Endnotes and Tables of Content, Indexes, and page Labels.

Typical Tags in PDFs (Slide 13)

Grouping Tags such as <Sect> and <Part>.

"Regular Tags: <P>, <H1> through <H6>.

If the PDF has H7 or lower, map it to H6. It is still a navigational point, not a paragraph.

<Figure> Tag for graphics.

<L>, , <Lbl>, and <LBody> for lists.

There is no distinction between ordered or unordered lists in PDFs.

<Table>, <THead>, <TBody>, <TFoot>, <TR>, TH, and <TD>.

Do not Tag page numbers! Apply Page Labels in the PDF Editor!

Start with a Tagged PDF (Slide 14)

The starting point for the PDF Techniques for WCAG 2.x is a tagged PDF.

Ensure that:

- Everything that needs a Tag has a Tag.
 - Decorative elements are Artifacts.
- The Tags are correct for the type of content.
- The Tags are in the logical reading order for the document.
 - This may not be the order in which elements appear on the page or pages.

For example, a tri-fold brochure or a newsletter with articles continued on other pages.

Source Content and Tagged PDFs (Slide 15)

Much of the work can be done in the source content. Then verified in the PDF with the quality assurance process.

PDF 18: Document Title - Microsoft 365 (Slide 16)

Figure 7 Advanced Properties dialog in Word showing Document title entered.

Using the W	/CAG 2StandardsForPDF.docx Pro ? ×
General Su	mmary Statistics Contents Custom
<u>T</u> itle:	Using the WCAG 2.x Standard for PDF Content
Subject:	a 🎲 📀)cument design
<u>A</u> uthor:	Karen McCall, M.Ed.
<u>M</u> anager:	
Company:	
Category:	tutorial
Keywords:	AODA, Accessibility for Ontarians with Disabilities Act,
Comments:	
<u>H</u> yperlink base:	
Template:	Karlen Brochure Comparison.dotx
🗌 Sa <u>v</u> e Th	umbnails for All Word Documents
	OK Cancel

Figure 8 Advanced Properties dialog showing the title of the document entered (PowerPoint 365).

Globalinclus	siveEducationStandardOctober20 ? ×
General Sun	mmary Statistics Contents Custom
<u>T</u> itle:	Global Inclusive Education
Subject:	research
<u>A</u> uthor:	Karen McCall, M.Ed.
<u>M</u> anager:	
Company:	Karlen Communications
Cat <u>eg</u> ory:	Inclusive Education
Keywords:	
Comments:	
Hyperlink base:	
Template:	Karlen
Sa <u>v</u> e pre	eview picture
	ОК Сал

PDF 18: Document Title - Adobe Acrobat (Slide 17)

Figure 9 Document Properties dialog, Description tab with Document title entered (Adobe Acrobat Pro DC).

Document Propert	es				×						
Description Secu	rity Fonts Initial View Custom	Advanced									
Description											
File:	WordSample2021Remediated.pdf										
<u>T</u> itle:	Word Document Optimized for Acces	ssibility 2021									
<u>A</u> uthor:	Author: "Karen McCall, M.Ed."										
<u>S</u> ubject:	accessible document design										
<u>K</u> eywords:	"AODA, Accessibility for Ontarians wi the Rights of Persons with Disabilities	th Disabilities Act, Section 5 , accessible document desi	508, ADA, Americans with Di gn, accessible PDF"	isabilities Act, CRPD, Co	onvention on						
Created:	2021-08-11 9:31:37 AM			Addition	al Metadata						
Modified:	2023-02-22 4:15:14 PM										
Application:	Microsoft® Word for Microsoft 365										
Advanced											
PDF Produc	er: Microsoft® Word for Microsoft 3	65									
PDF Versio	on: 1.7 (Acrobat 8.x)										
Locatio	on: D:\Documents\Sample Word Doc	ument 2023\2021\									
File Si	ze: 335.24 KB (343,283 Bytes)										
Page Si	ze: 8.50 x 11.00 in	Number of Pages:	10								
Tagged Pl	DF: Yes	Fast Web View:	No								
Help				ОК	Cancel						

Figure 10 Document Properties dialog, Initial View tab showing Document Title to be shown (Adobe Acrobat Pro DC).

Document Properties							×
Description Security	Fonts	Initial View	Custom	Advanced	ł		
Layout and Magnifica	ation						
Navigation tab:	Page Or	nly		~			
Page <u>l</u> ayout:	Default			~			
<u>M</u> agnification:	Default			~			
Open to page:	1	of 10					
Window Options							
Resize window t	o initial pa	age					
<u>C</u> enter window	on screen						
Open in <u>F</u> ull Scr	een mode						
S <u>h</u> ow: Documen	t Title	~					
User Interface Option	s						
🗌 Hide menu <u>b</u> ar							
Hide <u>t</u> ool bars							
Hide window co	ontrols						
Help						OK Cancel	

PDF 18: Document Title – Foxit PDF Editor (Slide 18)

Figure 11 Properties, Description area, Document Title present (Foxit PDF Editor).

Properties	Properties	Description	
Create		General	
Open		File	le Word Document 2023\2021\WordSample2021CheckTOC
Save	1	PDF Version	PDF-1.7
		Fast Web View	No
Save As	Security	Tagged PDF	Yes
PDF Optimizer		Page Size	[8.50 * 11.00 inch]
Action Wizard	Aa Fonts	Pages	10
	Co Advanced	Title	Word Document Optimized for Accessibility 2021
Export	~	Subject	accessible document design

Properties	Properties	Initial View	
Create		Layout and Destinati	ion
Open	Description	Navigation	Page Only ~
	Initial View	Page Layout	Default 🗸
Save As		Magnification	Default 🗸
	Security	Open to page	1 / 10
PDF Optimizer	Aa Fonts		
Action Wizard	~	Window Options	
Export	کې Advanced	☑ Display document title	
Print		Open in <u>F</u> ull Screen me	ode
		Center window on scre	een
Batch Print		Resize window to initia	il page

Figure 12 Properties area, Initial View set to Show Document title (Foxit PDF Editor).

PDF 9: Headings - Microsoft 365 (Slide 19)

Use Heading Styles in Word.

Ensure that the Headings are sequential.

Avoid skipping Headings.

Avoid H1 followed by H3; or H2 followed by H6.

Heading styles are the foundation for a linked Table of Contents and Bookmarks in PDFs.

Use the default Slide Title placeholder in PowerPoint!

Do not replace with Text Boxes!

When presentations are converted to tagged PDF, it is the slide titles that convert to Headings.

Title Slide and Section Headers are H1s

All other slide titles are H2s.

PDF 9 Headings: Acrobat and Foxit (Slide 20)

There are several ways to remediate Headings in either PDF Editor.

Double click on a Tag and change its designation.

Use the Reading Order panel or Order Panel to change its designation.

Right-click on the errant Tag, choose Properties and change the designation.

Content Tag Color	
_Jype: Tįtle: Actual Text:	Heading V Bibliography Entry Block Quote Caption Code
Alternate Text for Images:	Division Document Figure Form Formula
Alter <u>n</u> ate Description for Links:	ineading
I <u>D</u> :	
<u>L</u> anguage:	~
<u>E</u> dit Tag	Edit Attribute Objects Edit Attribute Classes

Figure 13 Object Properties dialog in Acrobat showing the list of possible Tag designations.

PDF 2: Bookmarks (Slide 21

Adobe Acrobat Pro DC and Foxit PDF Editor have a Bookmarks Panel in the Navigation Pane.

Bookmarks can be added manually if the PDF is auto tagged or there is not a way to convert Headings to Bookmarks.

Figure 14 Bookmarks Panel in the Navigation Pane showing list of Bookmarks.



PDF 2: Bookmarks - Microsoft 365 (Slide 22)

When saving a word document for the first time, go to the Options button in the Save As dialog.

File, Save As, More Options.

In the Options dialog, check "Create Bookmarks from:" and then check Headings.

You should only need to do this once in a document or template.

Figure 15 Options dialog from the Save As dialog once the PDF file type is chosen.

Options ? X
Page range
○ Curr <u>e</u> nt page
○ Selection
○ Page(s) From: 1 → To: 1 →
Publish what
O Document
 Document showing markup
Include non-printing information
Create bookmarks using:
O Headings
Word bookmarks
Document properties
Document structure tags for accessibility
PDF options
PDF/A compliant
Optimize for image <u>q</u> uality
Bitmap text when fonts may not be embedded
Encrypt the document with a password
OK Cancel

PDF 2: Bookmarks - Adobe Acrobat Pro DC (Slide 23)

Figure 16 New Bookmarks from Structure option in the Bookmarks Panel Options menu (Adobe Acrobat Pro DC).



Figure 17 Structure Elements dialog showing several Heading levels to be used as Bookmarks (Adobe Acrobat Pro DC).

Structure Elements			×
Structure			
Artifact Figure Footnote			
H1 H2 H3			
H4 L			
	Select All	Clear All	
		ОК	Cancel

PDF 2: Bookmarks – Foxit PDF Editor (Slide 24)

Figure 18 New Bookmarks from Structure option in the Bookmarks Panel Options menu (Adobe Acrobat Pro DC).



Figure 19 Structure Elements dialog showing several Heading levels to be used as Bookmarks (Adobe Acrobat Pro DC).

Structure Elements		×
Structure		
Artifact Figure Footnote		
H1 H2 H3 H4		
L	Select All Clear All	
	ок с	ancel

PDF 1: Alternate Text - Microsoft 365 (Slide 25)

Alternate Text can be added in the source document.

For example, Word, PowerPoint, Excel or Outlook.

Microsoft 365 has a "mark as decorative" checkbox for Artifacts.

Figure 20 Alt Text Pane in Word (Microsoft 365).

Alt Text \sim \times
How would you describe this object and its context to someone who is blind or low vision? - The subject(s) in detail - The setting - The actions or interactions - Other relevant information
(1-2 detailed sentences recommended)
Generate alt text for me
Mark as decorative

PDF 1: Alternate Text - Adobe Acrobat Pro DC (Slide 26)

Figure 21 Adobe Acrobat Pro DC, Accessibility tools, Set Alternative Text dialog.

Set Alternate Text >	<
Image 1 of 14	
Alternate text: Decorative figure	
Save & Close Cancel	

Content Tag Color	
<u>Т</u> уре:	Figure
T <u>i</u> tle:	
<u>A</u> ctual Text:	
Alte <u>r</u> nate Text for Images:	
Alter <u>n</u> ate Description for Links:	
I <u>D</u> :	
<u>L</u> anguage:	×
<u>E</u> dit Tag	Edit Attribute Qbjects Edit Attribute Classes

Figure 22 The Object Properties dialog for a tag in Adobe Acrobat Pro DC showing the Alternate Text edit area.

PDF 1: Alternate Text - Foxit PDF Editor (Slide 27)

Figure 23 Foxit PDF Editor Set Alternative Text dialog.

Set Alternate Text	X
< Image 1 of 14	
Alternate text: Decorative figure	
Save & Close Cancel]

bject Properties	
Content Tag Col	or
	
<u> </u>	Figure
Title	
<u>A</u> ctual Text	
Alte <u>r</u> nate Text	
ID	
<u>L</u> anguage	<u> </u>
<u>E</u> dit Tag	. Edit Attribute <u>O</u> bjects Edit Attribute Classes
	Close

Figure 24 The Object Properties dialog on a tag in the Tags Tree (Foxit PDF Editor).

PDF 4: Decorative Images - Microsoft 365 (Slide 28)

In Word, PowerPoint, Excel, and Outlook, graphics can be identified as decorative or Artifacts.

If a graphic is marked decorative in Microsoft 365, it will be an Artifact when the content is converted to tagged PDF.

Figure 25 Microsoft 365, Alt Text Pane, Mark as Decorative option.

Alt Text \checkmark ×					
How would you describe this object and its context to someone who is blind or low vision? - The subject(s) in detail - The setting - The actions or interactions - Other relevant information					
(1-2 detailed sentences recommended)					
	l				
Generate alt text for me					
Mark as decorative					

PDF 4: Decorative Images – Adobe Acrobat (Slide 29)

Figure 26 Graphic in a PDF selected showing the buttons in the Reading Order Panel active (Adobe

	Reading Order			
	Draw a rectangle around the content then click one of the buttons below:			
Figure - Mineral deposit in Cave of the	Text/Pa	ragraph	Figure	
	Form Field		Figure/Caption	
	Heading 1	Heading 4	Table	
	Heading 2	Heading 5	Cell	
	Heading 3	Heading 6	Formula	
	Reference (q)	Note (z)	Background/Artifact	
	Table Editor			
	Show page content groups			
	O Page content	t order		
s Karen McCall, Med	O Structure typ	es		
Convright 2022	Show table cells			
	Show tables an	d figures		
	Clear Page Structure		Show Order Panel	
	Help		Close	

Figure 27 Graphic in a PDF selected showing the buttons in the Reading Order Panel active (Adobe

Set Alternate Text X
Image 1 of 14
Alternate text: Decorative figure
Save & Close Cancel

PDF 4: Decorative Images - Foxit PDF Editor (Slide 30)

Figure 28 Foxit PDF Editor Set Alternative Text dialog.

Set Alternate Text	X
< Image 1 of 14	
Alternate text: Decorative figure	
· · · · · · · · · · · · · · · · · · ·	
Save & Close Cancel]

Figure 29Touch-Up Reading Order Panel showing graphic selected and Tag as Background/Artifact button active (Foxit PDF Editor).

	Touch Up Reading	• Order	×	
	Draw a rectang one of the butt	le around the cont ons below:	tent then click	
	Te	xt	Figure	
7 Figure - Mineral deposit in Cave of the	Form	Field	Figure/Caption	
	Heading 1	Heading 4	Table	
	Heading 2	Heading 5	Cell	
	Heading 3	Heading 6	Formula	
A STANDARD MAN	Reference(q)	Note(z)	Background/Artifact	
5 ren McCall, Med	Table Editor			
6 <u>9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9</u>	Show page c	Show page content groups		
	O Page cor	ntent order		
	Structure types			
	Display like e	ens lements in a singl	e box	
	Show tables	and figures		
	Clear Page Struc	ture	Show Order Panel	
	Help		Close	

PDF 8: Abbreviations – Adobe Acrobat Pro DC (Slide 31)

Figure 30 The Tags Tree showing the tag used to isolate an acronym (Adobe Acrobat Pro DC).



Figure 31 Object Properties dialog showing the Content tab, Expansion Text editor (Adobe Acrobat Pro DC).

Object Properties	X
Content Tag Co	lor
Туре:	Container
Con <u>t</u> ainer Tag:	Article
Structure Tag:	Article
Expansion Te <u>x</u> t:	
<u>L</u> anguage:	
	<u>E</u> dit Dictionary
	<u>C</u> lose

PDF 8: Abbreviations – Foxit PDF Editor (Slide 32)

Figure 32 Acronym isolated using the tag (Foxit PDF Editor).

The Constraint, and Strate Rights The NEB is an American organization of people who are blind or visually disabled. Strate Rights The NEB is an American organization of people who are blind or visually disabled.	e ব <p> -o The ● ∿ –o is an American organiza</p>	For acronyms: The NFE is an American organization of people who are blind or visually disabled.
---	---	---

Figure 33 Object Properties dialog Showing Content tab, Expansion Text editor (Foxit PDF Editor

Object Properties	•
Content Tag Cole	or
Јуре:	Container
<u>C</u> ontainer Tag:	Span 🗸
Structure Tag:	Span
Expansion Text:	1
<u>L</u> anguage:	Edit Dictionary
	Close

PDF 6: Correct Table Tagging (Slide 33)

Tables must have a parent <Table> Tag.

The <THead> Tag contains the Table Header Row.

The <TBody> contains the data for the table.

<TR> must be present for rows in the table.

<TH> Tags identify column and row titles.

<TD> Tags identify Table Data Cells.

<TFoot> can be used for source/citation information

Figure 34 Sample table tags in the Tags Tree of a PDF.



PDF 20: Table Editor (Slide 34)

The Table Editor is available in both Adobe Acrobat Pro DC and Foxit PDF Editor.

It is accessed through the Reading Order Panel when a table is selected in a PDF.

This is not a fair checkpoint as not all PDF Editors may have a Table Editor.

Figure 35 Reading Order Panel showing Table Editor (Adobe Acrobat Pro DC).

∃his table is an example Editor of a PDF Editor.	eading Order		
4 ble 1 Plants in my garden.	Draw a rectangle ar the buttons below:	round the conter	nt then click one of
Table nt 6	Text/Para	agraph	Figure
9ris	Form	Field	Figure/Caption
	Heading 1	Heading 4	Table
15	Heading 2	Heading 5	Cell
25 olly Hocks	Heading 3	Heading 6	Formula
2	Reference (q)	Note (z)	Background/Artifact
3		Table Edit	or
	Show page cont	tent groups	
	 Page content Structure type 	order 15	
	Show table cells	;	
	🗌 Display like elem	nents in a single	block
	Show tables and	l figures	
	Clear Page Stru	icture	Show Order Panel
	Help		Close

PDF 20: Table Editor - Adobe Acrobat Pro DC (Slide 35)

Figure 36 Table Editor, Table Cell Properties dialog, Adobe Acrobat Pro DC.

Table Editor Options	×
Color Options	
Border color	
Header cell color	
Data cell color	
Selection color	
Show cells that span multiple rows or columns	
Show cells with missing header	
Label Option	
Show cell type (TH or TD)	
OK Car	ncel

Figure 37 Table in Table Editor mode Adobe Acrobat Pro DC.

THlesperson	TH First Ha	alf of 2020	TH Second H	lalf of 2020
TH	_{TH} rst Quarter	TH <mark>econd Quarter</mark>	⊺H <mark>hird Quarter</mark>	TH'ourth Quarter
THrnaby	TD <mark>500</mark>	TD 500	TD500	TD:500
THvia	TD\$25	тD <mark>650</mark>	TD <mark>750</mark>	TD:775
тніе	TD <mark>750</mark>	td <mark>750</mark>	TD550	TD:950
THed	TD <mark>250</mark>	td <u>875</u>	TD500	TD <mark>-850</mark>

Figure 38 Table Cell Properties dialog in Adobe Acrobat Pro DC.

Table Cell Properties	×
Type ● <u>Header Cell</u> <u>S</u> cope: ○ <u>D</u> ata Cell	None
Attributes	
<u>R</u> ow Span:	1
<u>C</u> olumn Span:	1
<u>I</u> D:	
<u>A</u> ssociated Header Cell IDs:	•
	OK Cancel

PDF 20: Table Editor - Foxit PDF Editor (Slide 36)

Figure 39 Table Editor, Table Editor Options sialog, Foxit PDF Editor.

Table Editor Options	×
Color Options	
Border color	
Header cell color	
Data cell color	
Selection color	
Show cells that span <u>m</u> ultiple rows or columns	
Show cells with missing <u>h</u> eader	
Label Option	
Show cell type (TH or TD)	
OK Cancel	

Figure 40 Table in Table Editor mode, Foxit PDF Editor.

Γ	Тн	esperson	тн	First Ha	lf o	f 2020	тн	Second Ha	lf	of 2020
		_	ΤН	rst Quarter	TH	econd Quarter	тн	hird Quarter	ΤН	ourth Quarter
	TH	rnaby	TD	500	TD	500	TD	500	TD	500
	TH	via	TD	525	TD	650	TD	750	TD	775
	TH	е	TD	750	TD	750	TD	550	TD	950
	ΤH	d	TD	250	TD	375	TD	500	TD	350

Figure 41 Table Editor, Table Cell Properties dialog, Foxit PDF Editor.

Table Cell Properties	×
Туре	
• Header Cell Scope:	None ~
○ <u>D</u> ata Cell	
Attributes	
<u>R</u> ow Span:	1
. <u>C</u> olumn Span:	1
<u>I</u> D:	
Associated Head Cell IDs:	+
	OK Cancel

PDF 21: Correct List Tagging (Slide 37)

In PDFs, there is only the concept of a list, there is no distinction between an ordered and unordered list.

You can have sub-lists.

Parent <L> Tag.

Each List Item has an Tag.

Each Tag has a <Lbl> Tag and <LBody> Tag.

Figure 42 Correctly tagged list and sub-list in a PDF.



Important Note About Tags (Slide 38)

If a paragraph, table or list spans more than one page, the paragraph text must be in a single <P> Tag, The complete table must be in a single <Table> Tag and the complete list must be in a single <L> Tag.

If these elements are divided, they will be read as two separate paragraphs, two separate tables and two separate lists.

The relationship of the information will be lost to those who use adaptive technology such as a screen reader.

Table Spanning Two Pages (Slide 39)

Figure 43 Sample table spanning two pages.

> ¶		Salesperson	First H	alf of 2020	Second H	Ialf of 2020
> ¶ <p></p>			First Quarter	Second Quarter	Third Quarter	Fourth Quarter
III (Table)		Barnaby	1500	2500	3500	4500
		Olivia	1525	2650	3750	4775
✓		Zoie	1750	2750	3650	4950
> == <tr></tr>		Fred	1250	2875	3500	4850
> == <tr></tr>	4					
✓						
> = <tr></tr>						
> == <tr></tr>						
> === <tr> > === <tr></tr></tr>						
> == <tr> > == <tr> > == <tr></tr></tr></tr>						
> == <tr> > == <tr> > == <tr> > == <tr></tr></tr></tr></tr>						
> == <tr> > == <tr></tr></tr></tr></tr></tr></tr></tr>						
> == <tr> > == <tr> > == <tr> > == <tr> > == <tr> > == <tr></tr></tr></tr></tr></tr></tr>		Salesperson	First H	alf of 2020	Second F	Ialf of 2020
 (R) = (R) 		Salesperson	First H First Quarter	alf of 2020 Second Quarter	Second F Third Quarter	lalf of 2020 Fourth Quarter
 -47 > mm -47 > mm		Salesperson Oscar	First H First Quarter 7650	alf of 2020 Second Quarter [2450]	Second F Third Quarter 3250	lalf of 2020 Fourth Quarter
> Ⅲ <tr> > Ⅲ <tr> > Ⅲ <tr> > Ⅲ <tr> > Ⅲ <tr> > Ⅲ <tr> = Π = TR> = Π = TR> = Π = TR> = Π = TR> = Π = TR></tr></tr></tr></tr></tr></tr>		Salesperson Dscar Cloe	First H First Quarter 7650 [1850]	alf of 2020 Second Quarter 2450 2585	Second F Third Quarter \$250 \$450	Ialf of 2020 Fourth Quarter #650 \$250
$ = \frac{1}{2} + \frac$		Salesperson Dscar Cloe Almee	First H First Quarter 7650 1850 1675	alf of 2020 Second Quarter 2450 2585 2570	Second F Third Quarter 5250 6450 8850	lalf of 2020 Fourth Quarter 4650 5250 8575
		Salesperson Dscar Cloe Rimee Edmund	First H First Quarter 7650 1850 1675 1355	alf of 2020 Second Quarter 2450 2585 2570 2650	Second F Third Quarter 8250 8450 8850 8650	lalf of 2020 Fourth Quarter 4650 5250 6575 4500

PDF 11 and 13: Links (Slide 40)

Links must have the long web address or text and the "Link-OBJR" annotation in order to be accessible.

Sometimes links coming from InDesign look like they are keyboard activated, even show up in a list from a screen reader but cannot be activated using the Enter key.

Always check!

Alt Text is not needed on contextual links!

Figure 44 Correct tagging on an accessible link in a PDF.



Language and Language Changes (Slide 41)

A PDF needs a core language, but if there are parts of the PDF or parts of a sentence with language changes, those need to be remediated.

PDF 16 and 19: Language (Slide 42)

The PDF must have a core language.

Document Properties, Advanced tab, Language.

Use plain language so that the end-user can use their synthesized localized voice.

A single Tag can have a different language.

Object Properties, Language.

Grouping Tags such as <Sect> or part can group multiple Tags in a different language and use the language attribute on the grouping Tag.

For words or phrases in a sentence, the Tag is used to isolate the word or phrase and the language attribute is applied.

PDF 16: Language of Document (Slide 43)

Figure 45 Document Properties dialog showing Advanced tab Language setting (Adobe Acrobat Pro DC).

Document Properties		×
Description Security Fonts Initial View Custom Advanced		
PDF Settings		
Base URL:		
Search Indeg:	Browse Clear	
_Trapped: Unknown ∨		
Accessibility		
PDE/UA Compliance: None ~		
Print Dialog Presets		
Page Scaling: Default \lor		
DuplexMode: Simplex ~		
Paper Source by Page Size:		
Print Page <u>R</u> ange:		
<u>N</u> umber of Copies: Default v		
Reading Options		
Binding: Left Edge ∨		
Language: English		
Protected Mode: On		
Heip	OK Cancel	

PDF 19: Changes in Language (Slide 43)

Figure 46 Correct tagging for language change in a sentence (Left) and Object Properties dialog showing Language setting (Right).

	Object Properties	×
	Content Tag Color	
	Јуре:	Span 🗸
	Title:	
✓ ¶ <p></p>	Actual Text:	
😝 The	Alternate Text for Images:	
∽ 🥔 		
😝 Institut national canadien	Alternate Description for Links:	
is a Canadian organization f	I <u>D</u> :	
	Language:	French
	<u>E</u> dit Tag	Edit Attribute Qbjects Edit Attribute Clagses
		Slose

WCAG Techniques for PDF Forms (Slide 44)

This is a grouping of all WCAG 2.x success criteria for PDF forms. Keep in mind that PDF forms are not HTML forms, so some things are different.

PDF Techniques for Forms (Slide 45)

PDF 12 name role etc. (Slide 46)

PDF 10 labels (Slide 47)

PDF 23 keyboard (Slide 48)

PDF 5 required fields (Slide 49)

PDF 15 buttons (Slide 50)

PDF 22 errors (Slide 51)

Form annotations must be added to the Tags Tree in order for the form to be accessible.

Form text must be tagged correctly.

Tooltips must be added to every form control.

PDF 12: Name, Role... Adobe Acrobat -1 (Slide 46)

Figure 47 ToolTip area of the Properties dialog (Adobe Acrobat Pro DC).

General	Appearance	e Position	Options	Actions	Format	Validate	Calculate
	<u>N</u> ame:	Name					_
	<u>T</u> ooltip:	First and last	: name				
Cor	nmon Prope	rties ————					
- Cor	mmon Prope Eorm Field:	rties Visible		~] <u>R</u> ead On	ly
Cor I	mmon Prope Eorm Field: 2rientation:	rties Visible 0 v d	legrees	~] <u>R</u> ead On]Require <u>c</u>	ly I
Cor I <u>C</u>	mmon Prope Eorm Field: Qrientation:	rties Visible 0 v d	legrees	~] <u>R</u> ead On]Require <u>c</u>	ly L

Figure 48 Sample of a correctly tagged form question with the <Form> Tag and its annotation nested with the question text (Adobe Acrobat Pro DC).

✓ ¶ <p></p>	and last name (required)
-------------	--------------------------

PDF 12: Name, Role... Adobe Acrobat - 2 (Slide 47)

Figure 49 Dropdown Properties dialog showing entries for a dropdown list (Adobe Acrobat Pro DC).

Dropdov	vn Prope	erties							×
Gene	ral App	earance	Position	Options	Actions	Format	Validate	Calculate	
	<u>l</u> te	m: Ful	Time			Add			
E	oport Valu	Je:							
	lt <u>e</u> m Li	st: Fu Pai	l Time t Time			Delet	e		
		Co	ntinuing E	ducation		Up			
						Dow	n		
			ort items						
			Allo <u>w</u> user f	o enter cu	stom text				
			neck spell	ing octod volu	o immodi	atoly			
			.ommi <u>r</u> sei	ecteu valu	emmedi	ately			
	Ŷ	Select defau	an item in t choice.	the list to	make it th	e			
<u>L</u> oc	ked							<u>C</u> lose	

Figure 50 Format tab in the Text Field Properties dialog showing date settings (Adobe Acrobat Pro DC).

General	Appearance Position Options Actions Format Validate Calculate
Select	format category: Date
Date	2 Options
	d-mmm-yyyy dd-mmm-yy dd-mmm-yyyy yy-mm-dd yyyy-mm-dd mmm-yy
E	cample of current format: 24-02-16
E	A wample of current format: 24-02-16 Use the Date format category to display only the date or both date and time values. Use the Time format category to display only the time.
E	cample of current format: 24-02-16 Vertical content of the co

PDF 12: Name, Role... Foxit PDF Editor – 1 (Slide)

Figure 51 Pop-up for a form control (Foxit PDF Editor).



Text Field Properties	×
General Appearance Position Options Format Validate Calculate Actions	
<u>N</u> ame: FirstLastName	
Tooltip: First and last name (required)	
Common Properties	
Eorm Field: Visible \checkmark \Box Read Only	
Orientation: 0 V Degrees Required	
<u>L</u> ocked <u>C</u> lose	כ

Figure 52 Properties dialog showing ToolTip area highlighted (Foxit PDF Editor).

PDF 12: Name, Role... Foxit PDF Editor - 2 (Slide 50)

Figure 53 Text Field Properties dialog, Options tab showing Alignment (Foxit PDF Editor).

Text Field Properties		X
General Appearance	Position Options Format Validate Calculate Actions	
Alignment	Right	
Aighnena	Ngin *	
Default Value:	A	
	Scroll long text	
	Allow <u>R</u> ich Text Formatting	
	Limit of 1 Characters	
	Password	
	Field is used for <u>file</u> selection	
	✓ Check spelling	
	Comb of Characters	
	<u>M</u> ulti-line	
	Line Spacing: Auto 🗸	
Locked	Close	
		1

Text Field Properties	×
General Appearance Position Options Format Validate Calculate Actions	_
Select <u>format category</u> : Number V	
<u>D</u> ecimal places: 2 ∨ <u>S</u> eparator style: 1,234.56 ∨	
C <u>u</u> rrency Symbol: U.S. Dollar(\$) V	
Negative number style: Sho <u>w</u> parentheses	
Use red <u>t</u> ext	
Example of current format: \$4,123.03	
Use the Number format category to display numbers, including currency styles.	
□ <u>L</u> ocked <u>C</u> lose	

Figure 54 Text Field Properties dialog, Format tab, Number and Currency format (Foxit PDF Editor).

PDF 10 Labels (Slide 51)

In the language of WCAG, Labels have a couple of meanings...I think.

In this case, "Label" is referring to the text in the form what asks for the information.

For example, First Name, Last Name, Date.

Include the date format in the text of the form AND in the Tooltip.

Figure 55 PDF form with date and date format identified in the "Label".

```
Date (mm-dd-yy)
```

PDF 23 Keyboard (Slide 52)

Form controls in PDF forms must be usable/accessible by keyboard.

This is where ensuring that the form is tagged correctly, and the form annotations are in their correct place in the Tags Tree.

Both must be correct in a PDF form.

Same idea as with links.

Figure 56 Correctly tagged date form control.



PDF 5: Required Fields (Slide 53)

There is a checkbox in the Properties dialog of form controls that can designate it required.

I generally use the entire word required so that the end-user knows that a form control is required.

It is too easy for an asterisk to be misread or skipped depending on the voice used by the end-user.

Using the abbreviation "req's" also present accessibility issues.

Figure 57 Text Field Properties dialog showing the Tooltip indicating a required field and the Required check box checked (Adobe Acrobat Pro DC).

ext Field P	roperties							
General	Appearance	Position	Options	Actions	Format	Validate	Calculate	
	<u>N</u> ame:	FirstLastNa	ime					
	<u>T</u> ooltip:	First and La	ast Name -	Required				
Co	mmon Proper	ties						
	<u>F</u> orm Field:	Visible		~	(<u> </u>	nly	
9	Orientation:	0 ~	degrees		1	Require Require	d	

PDF 15: Submit Button (Slide 54)

There are two parts to creating an accessible Submit button:

The Tooltip which the adaptive technology reads.

The text or value on the button that is visible to those accessing the form visually.

Submit button actions are found under the Action button in the Button Properties dialog.

Figure 58 Sample Submit buttons. Note the one in the upper left has no label and is inaccessible visually.



PDF 22: Error Messages (Slide 55)

When you define a date format (for example), if the date is entered incorrectly, there will be an error message indicating the correct date format as defined by the form control.

If you are using a character limit on a multi-line form control, there is no error message when the limit is exceeded.

Figure 59 Date form control with inaccurate format entered and Error dialog.

September 5, 2024	
Date (date format yy-mm-dd)	
Warning: JavaScript Window -	
Invalid date/time: please ensure that the date/time exists. Field [Date] should match format yy-mm-dd	
ОК	

PDF 23: Interactive Forms (Slide 56)

This technique reinforces that the form itself must be tagged and the form controls must be in the Tags Tree in the <Form> Tag.

Each <Form> Tag must be in the same <P> Tag with the information being asked for.

Figure 60 Correctly tagged form control in the Tags Tree.



Page Headers, Footers and Page Numbers (Slide 57)

In PDFs, Page Headers and Footers as well as Page Numbers are non-printing elements and are NOT tagged!

PDF 14: Page Headers and Footers (Slide 58)

In PDFs the page headers and footers are "non-printing" elements and are Artifacts.

They don't serve the same purpose as they do in HTML.

Visually, do you stop and read every page header and footer for every page in a document?

We shouldn't be forced to either.

PDF 17: Page Numbers (Slide 59)

Page numbers are not tagged in the Tags Tree!

Where would you put page numbers in the middle of a paragraph, list or table?

Before the 3 pages of table, after, in the middle where someone is trying to understand the data?

Page Labels are used by everyone to designate correct page numbers.

JAWS and NVDA have keyboard commands to read page Labels.

Ctrl + Shift + N opens the Go To Page dialog in Acrobat. You can also double-click in the Toolbar and type in a page number to go to in most PDF Editors or Readers.

Figure 61 Go To Page dialog (Adobe Acrobat Pro DC).

Go To Page	×
Page:	
OK Cancel	
L.	

PDF 17: Page Labels in PDFs (slide 60)

Figure 62 Pages Panel context menu showing Page Labels (Adobe Acrobat Pro DC).

I <u>n</u> sert Pages	I <u>n</u> sert Pages •		
E <u>x</u> tract Pages			
<u>R</u> eplace Pages			
Del <u>e</u> te Pages	Shift+Ctrl+D		
Crop P <u>ag</u> es			
Ro <u>t</u> ate Pages	Shift+Ctrl+R		
Export Pages	Þ		
Page Transition <u>s</u>			
Cu <u>t</u>	Ctrl+X		
<u>С</u> ору	Ctrl+C		
Page La <u>b</u> els			
<u>P</u> rint Pages	Ctrl+P		
Embed All Page T <u>h</u> umbnails Remo <u>v</u> e Embedded Page Thumbnails Reduce Page Thumbnails En <u>l</u> arge Page Thumbnails Page Pr <u>o</u> perties			

Figure 63 Pages Panel and Page Label dialog (Adobe Acrobat Pro DC).

ر ط	Page Thumbnails X		DEIL
	E- Ū⊼ΩQ	1	Page labels X
			Pages
O			
			● <u>S</u> elected
E	Check Day, powerby and day alopment		○ <u>F</u> rom: <u>1</u> <u>I</u> o: <u>1</u> of 21
嚣			Numbering
R.			• Begin new section
\otimes			Style: 1, 2, 3, 🗸
	n en ondererer kansen og en og en en og en o en og en og		Prefix: Cover
			Start: 1
	2		○ <u>E</u> xtend numbering used in preceding section to selected pages
			Sample: Cover 1, Cover 2, Cover 3,
		4	OK Cancel

Tab Order and Logical Reading Order (Slide 61)

There is a misconception that those of us who use adaptive technology (screen readers) "Tab" through content. We Tab through links and Form Controls, not text. The Logical reading Order of a PDF is not the same as the Tab Order.

PDF 3: Tab Order - 1 (Slide 62)

The Tab is used to move from link to link or form control to form control.

It is NOT used to move character by character, word by word, line by line, paragraph by paragraph.

Figure 64 Tab Order numbers in a PDF form.



PDF 3: Tab Order - 2 (Slide 63)

Think of this. If someone was just using the Tab key to move through content, how would we know which "Tab" moved us character by character, which "Tab" moves us word by word, which "Tab" moves us line by line, which "Tab" moves us paragraph by paragraph, which "Tab" moves us page by page, which "Tab" lets us navigate by Heading, table, list, or graphic? If we stop to think of the implications of using a single key to navigate every element, we see the fallacy in this type of thinking. It is the same when we think of text with no punctuation.

PDF 3: Logical Reading Order (Slide 64)

The logical reading order of a PDF is not necessarily the order in which content is laid out in the document.

Consider a multilingual document where one language is on the left and the other is on the right (in columns).

Logically, all of one language would be grouped together.

PDF 3: Sample Multilingual Document (Slide 65)

Figure 65 Multilingual PdF with all of one language grouped together; and all of the other language grouped together.



PDF 3: Logical Reading Order – Tri-Fold Brochure (Slide 66)

Figure 66 Logical reading order for a tri-fold brochure. Read the title panel first.



Resources (Slide 67)

Some of these resources are free, others are fee-based.

WCAG PDF Techniques in Order (Slide 68)

PDF 1 Alt Text

- PDF 2 Bookmarks PDF 3 Tab Order/Logical Reading Order PDF 4 Decorative Images
- PDF 5 Required Fields

PDF 6 Tables

- PDF 7 Scanned PDFs
- PDF 8 Abbreviations/Acronyms
- PDF 9 Headings
- PDF 10 Labels
- PDF 11 Correct Link Annotations
- PDF 12 Name, Role, Value
- PDF 13 Alt Text for Links
- PDF 14 Page Headers and Footers
- PDF 15 Buttons
- PDF 16 Default Language
- PDF 17 Page Numbers
- PDF 18 Document Title
- PDF 19 Changes in Language
- PDF 20 Table Editor
- PDF 21 Lists
- PDF 22 Errors
- PDF 23 Keyboard

Additional 2.1 Techniques (Slide 69)

- .3.5 <u>Identify Input Purpose</u> (AA)
- 1.3.6 Identify Purpose (AAA)

1.4.10 <u>Reflow</u> (AA)

1.4.13 <u>Content on Hover or Focus</u> (AA)

2.5.3 Label in Name (A)

2.5.6 Concurrent Input Mechanisms (AAA)

4.1.3 <u>Status Messages</u> (AA)

Additional 2.2 Techniques (Slide 70)

2.4.13 Focus Appearance (AAA)

2.5.8 Target Size (Minimum) (AA)

3.3.7 <u>Redundant Entry</u> (A)

Authentication is voluntary with the PdF Identifier.

It is often added automatically, or without verification.

3.3.8 Accessible Authentication (Minimum) (AA)

3.3.9 Accessible Authentication (Enhanced) (AAA)

Contact Information (Slide 71)

Karen McCall, M.Ed.

info@karlencommunications.com

Karlen Communications Home Page¹

Karen McCall School on Teachable (eachable.com)²

Not on Facebook or Instagram, no longer on twitter...but am on LinkedIn and Mastadon!

¹ Karlen Communications Home page: <u>https://www.karlencommunications.com/</u>

² Karen McCall School on teachable: <u>https://karen-mccall.teachable.com/</u>