



*Introducing PDF/UA &
Solutions for Accessible PDF*

CommonLook

- A brand of NetCentric Technologies (est. 1995)
- Dedicated to PDF accessibility since 2004
- First with 3rd party PDF tagging software
- Complete solutions for the entire document lifecycle
- On demand PDF accessibility services
- PDF/UA and WCAG 2.0 support coming soon!



Why we need PDF

It's the

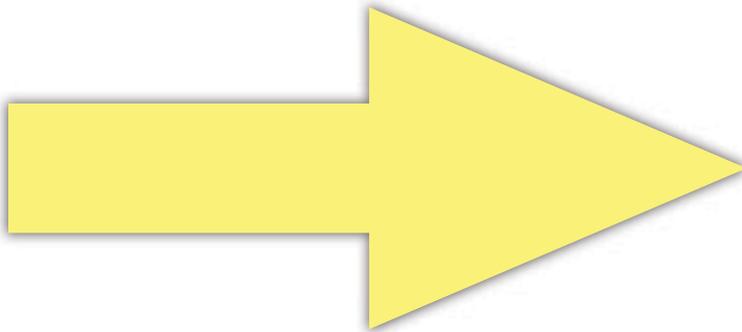
Portable Document Format



Where is PDF from? Why do we use it?

■ Original Applications

- “Portable PostScript”
- Graphic design
- Publishing and high-end print applications
- Government (the very first PDF was an IRS 1040 form!)



■ Key Value Proposition(s)

- Portable, reliable, flexible
- Content from any source may be unified in one file
- Interoperable with paper
- May be authenticated and/or secured
- Easy to make (like printing)
- Free viewing software
- Became non-proprietary (ISO 32000) in 2008

Why PDF?



1500

Where is PDF going?

UP

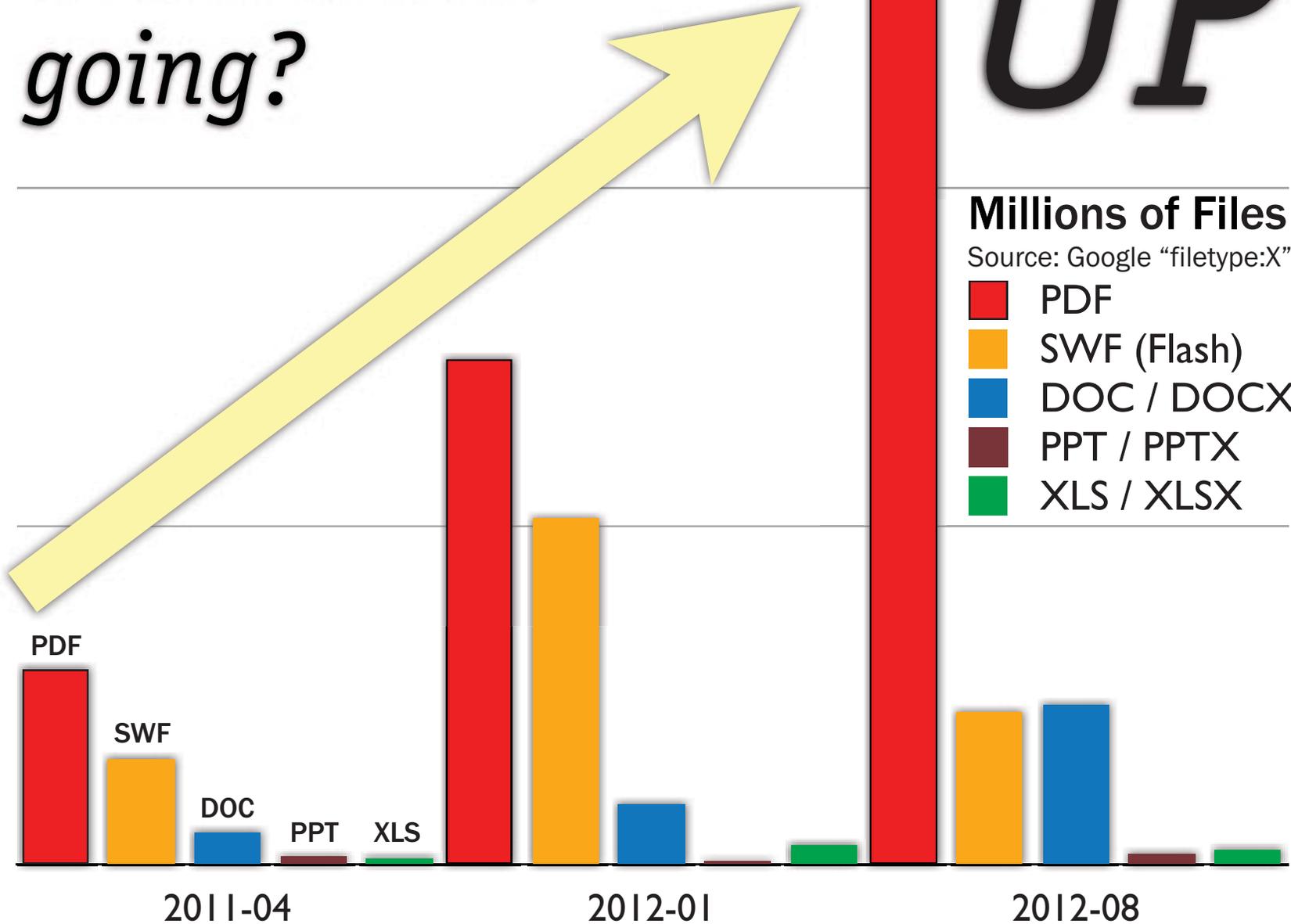
1000

500

Millions of Files Online

Source: Google "filetype:X" search

- PDF
- SWF (Flash)
- DOC / DOCX
- PPT / PPTX
- XLS / XLSX



Why PDF?



It's all in one package

- Entirely self-contained
- Rich graphical content, including total layout control, embedded scalable fonts, vector graphics, transparency, layers, JPEG2000 and more
- Rich interactive features
- Standardized metadata model (XMP)
- Supported by thousands of vendors world-wide
- Non-proprietary International Standard (ISO 32000)
- ...and of course, PDF can be made accessible!

Why PDF?



Where the Rubber meets the Road

- PDF is reliable; it looks and works the same everywhere
- PDF is easy to make (akin to printing) and share
- PDF can interoperate with paper in arbitrary workflows
- PDF includes searchable text, including scanned pages
- PDF provides bookmarks, links, forms and annotations
- PDF files may include scripts, movies and attachments
- PDF may be encrypted, and include digital signatures

Nothing puts it all together like PDF.

Why PDF?



*Users and Organizations **LOVE PDF!***

- PDF is reliable, and looks the same everywhere (Windows, Mac, Linux, tablet, phone, printer, etc.)
- PDF is difficult to alter but may be secured, stamped, annotated, redacted, digitally signed and much more
- PDF works offline; PDF/A files will last forever
- PDF is sturdy, powerful and flexible; it's "electronic paper", but in a good way
- PDF files are EASY, ok!
- BUT - it does have it's challenges...

Why PDF?



Web Content Managers *HATE PDF!*

- PDF appearance is unmanaged (no CSS and template usage beyond web content management's control)
- No visibility: even 1,000 page PDF files are “managed” by Content Management Systems as single objects
- While web pages can easily be fixed or tweaked, changing PDF files usually means returning to the source
- HTML is “light,” PDF files can be huge (after all, they may contain hundreds or thousands of pages)
- Anyone can and does make PDF documents and forms, so why is it a “web content” problem?

Why PDF?



1500

Deal with it.

PDF

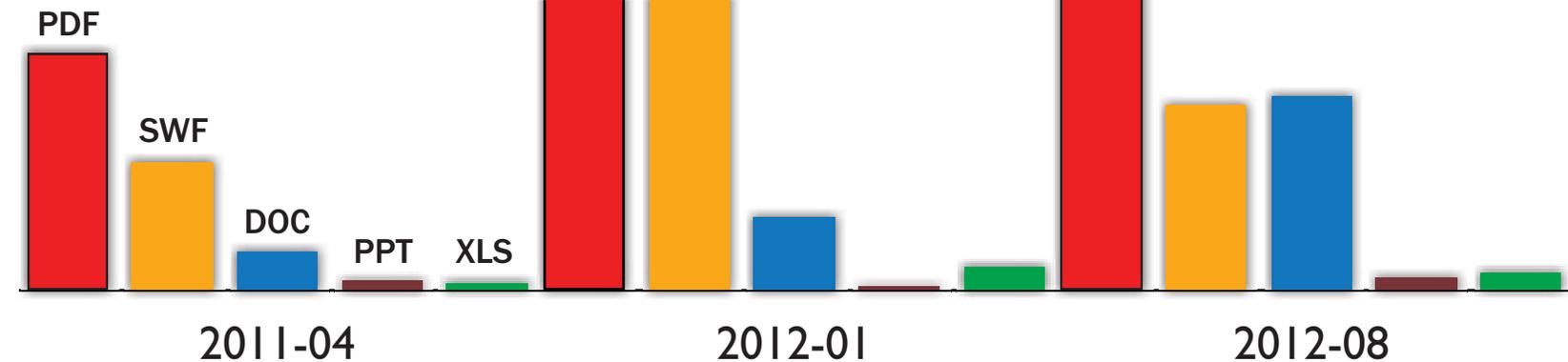
1000

Millions of Files Online

Source: Google "filetype:X" search

- PDF
- SWF (Flash)
- DOC & DOCX
- PPT & PPTX
- XLS & XLSX

500



Why PDF?



What is PDF?

Why is it so complicated!



HTML / CSS / JavaScript

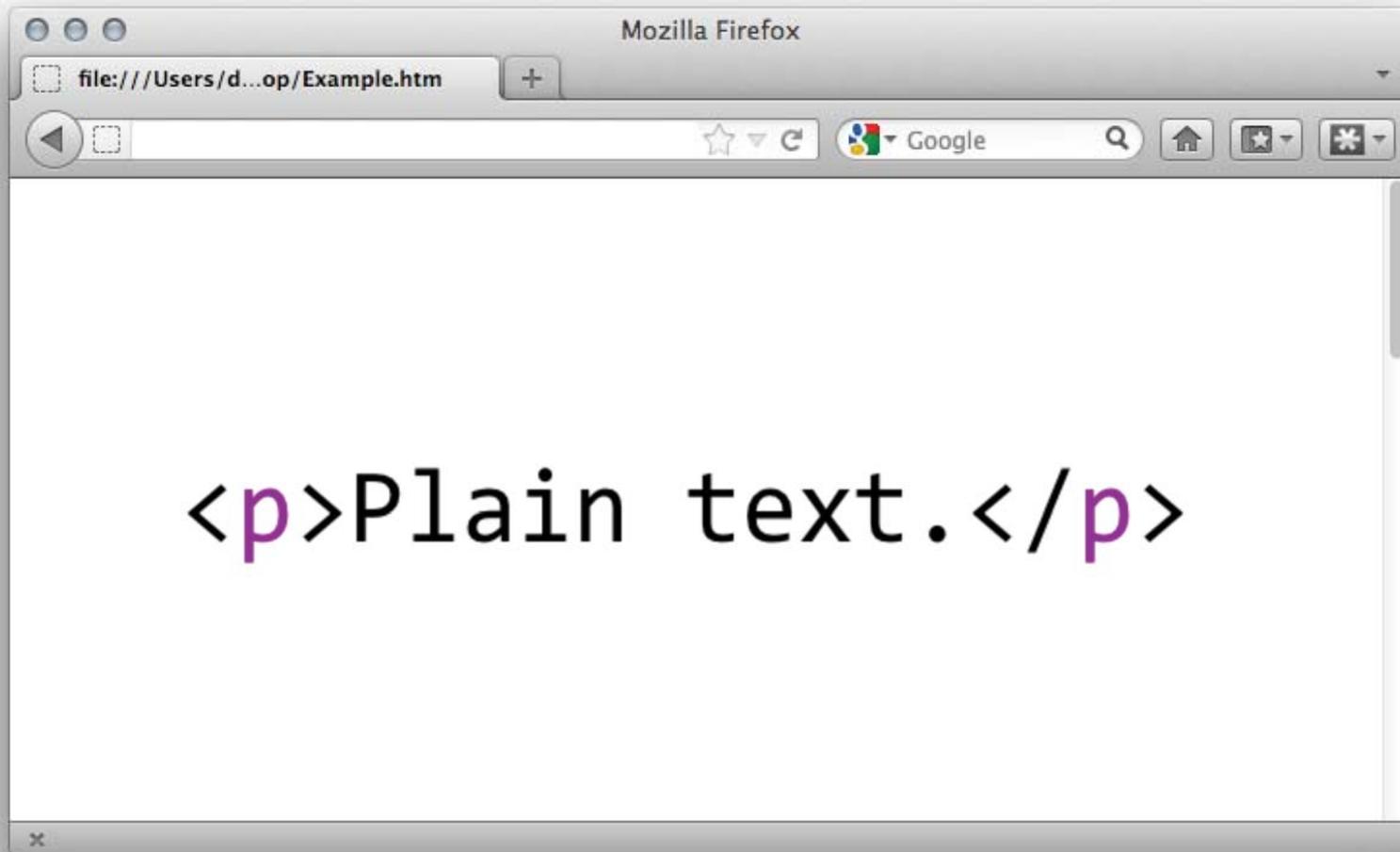
Layout is controlled by the **browser**

PDF

Layout is controlled by the **file**

What is PDF?





What is PDF?



PDF is a bit...
...different

What is PDF?



Plain Text.

What is PDF?



```
%PDF-1.2
1 0 obj
<<
  /Type /Page
  /Parent 5 0 R
  /Resources 3 0 R
  /Contents 2 0 R
>>
endobj

2 0 obj
<<
  /Length 51
>>
stream
BT
  /F1 24 Tf
  1 0 0 1 260 254 Tm
  (Plain Text.)Tj
ET
endstream
endobj
3 0 obj
```



```
<<
  /ProcSet[/PDF/Text]
  /Font <</F1 4 0 R >>
>>
endobj
4 0 obj
<<
  /Type /Font
  /Subtype /Type1
  /Name /F1
  /BaseFont/Helvetica
>>
endobj
5 0 obj
<<
  /Type /Pages
  /Kids [ 1 0 R ]
  /Count 1
  /MediaBox
    [ 0 0 612 446 ]
>>
endobj
6 0 obj
```

```
<<
  /Type /Catalog
  /Pages 5 0 R
>>
endobj
trailer
<<
  /Root 6 0 R
>>
```

What is PDF?



PDF/UA

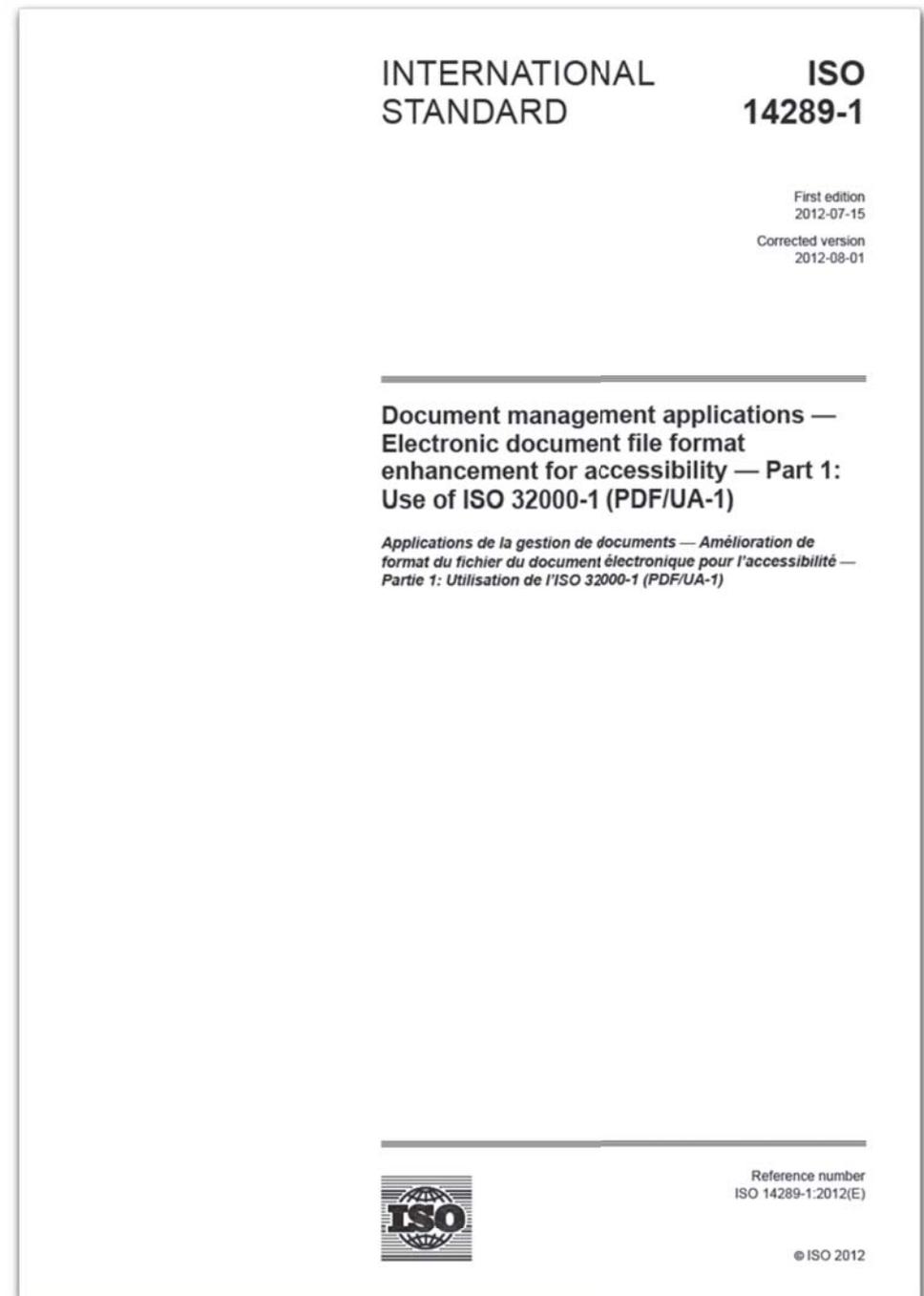


PDF/UA

The ISO Standard for accessible PDF technology

*...and the first accessible
(tagged) ISO Standard...*

(available from iso.org)



What is PDF/UA?



The Immediate Audience for PDF/UA

- It's a technical document, not a best-practice guide, so...
 - Software developers:
 - “Uh ho, this customer says we need to conform to PDF/UA!”
 - Those procuring software to create or read accessible PDF files:
 - “Does this PDF creation or reading software really support PDF/UA?”
 - Those evaluating assistive technology (AT) for PDF support:
 - “Does this AT support PDF/UA?”
 - Technically-minded end users and accessibility advocates:
 - “Do these files / does this PDF creation, testing or remediation software conform to PDF/UA?”

What is PDF/UA?



Why the world needs PDF/UA

- **FACT:** A key problem with accessibility today (and especially with PDF) is inconsistent & insufficient methods and tools.
- **FACT:** The reality is that PDF creation can't be fully controlled; PDF files are easy to make, using any software. This isn't a "bad thing" - PDF is a reality for good reasons.
- **FACT:** PDF/UA provides a clear normative framework for software to create, test and remediate accessible PDFs.
- **FACT:** PDF/UA makes it easier for software developers to produce WCAG 2.0 conforming PDF files because it provides technically-specific requirements. Development is encouraged because the risk is reduced, the objective is clearly defined and the marketplace is expanded.

What is PDF/UA?



PDF/UA

Normative Requirements

- **File Format (section 7)**
- **Reader (section 8)**
- **Assistive Technology (section 9)**

What is PDF/UA?



Section 7: File Requirements

- An unambiguous distinction between “real” and “artifact” content
- Semantically appropriate tags in a logical reading order
- Information shall not be conveyed by contrast, color, format or layout unless the content is tagged to reflect all intended meaning
- OCR generated text shall be corrected
- Natural language shall be declared
- Meaningful graphics shall include alternative text
- If present, headings shall proceed in a logical sequence, e.g. “H1, H2, H3”
- Embedding files in PDF is permitted; these “should” be accessible in their own right
- Dynamic XFA content shall not be included
- Annotations (e.g. notes) shall be tagged correctly
- Links shall contain alternate descriptions
- Media clips (e.g. movies) shall include alt. text
- Scripts (e.g. form validation) shall operate in an accessible fashion
- Fonts shall be embedded, characters shall have valid Unicode mappings



Section 8: Reader Requirements

- Process all structure types and attributes
- Shall make artifacts available to AT
- Shall not interfere with any AT feature
- Shall announce visible or focus changes from Actions
- Navigation via PageLabels, structure and bookmarks
- Read alternate descriptions for annotations
- Fully process form fields (sequence, value, state, role, type)
- Media playback controls made available



Section 9: AT Requirements

- Shall have the ability to process and represent all structure types, attributes and key values to the user
- Be able to navigate using PageLabels, structure hierarchy (tags) and outlines (bookmarks)
- Allow navigation zoom values to be overridden by the user



Key Facts about PDF/UA

- PDF/UA conformance is the gold standard for accessible electronic documents and software using the PDF format
- PDF/UA provides clear technical specifications for correct usage of PDF for accessibility and WCAG 2.0 conformance
- PDF/UA doesn't add anything new to PDF
(It was possible to create accessible PDF in 2000)
- For those already well-versed in PDF accessibility, PDF/UA contains few surprises
- PDF/UA encourages development of more and better PDF accessibility software, especially if PDF/UA-conforming software is specified in procurements

What is PDF/UA?



Who supports PDF/UA

- ISO 14289 was published in August, 2012
- Adobe Systems has announced plans to support PDF/UA
- NetCentric is actively working on both PDF/UA and full WCAG 2.0 support in CommonLook products
- NV Access is working on PDF/UA support for NVDA
- The PDF Association's PDF/UA Competence Center is developing the "Matterhorn Protocol" validation model to help ensure PDF/UA vendors produce consistent results
- Other PDF producers and accessibility vendors are planning support for PDF/UA

What is PDF/UA?



How WCAG 2.0 works with PDF/UA

- Use WCAG 2.0 to set general principles
- Use WCAG 2.0 to specify design requirements
- Use WCAG 2.0 to specify scripting requirements
- Use WCAG 2.0 to specify multimedia requirements
- Use PDF/UA to achieve WCAG 2.0 with PDF
- Use PDF/UA conforming software to check PDFs
- Use PDF/UA to procure accessible PDF software
- Use PDF/UA to specify navigation requirements



Let's be specific.

*If we go with PDF/UA,
how will it help?*

What is PDF/UA?



End Users Get

- A top-quality reading and navigating experience with conforming AT
- High-quality results accessing PDF content on mobile devices
- Improved re-use (copy & paste, extract to HTML)
- High quality search results with conforming search engines

Organizations Get

- Enhanced communications with persons using conforming AT
- Technically-specific means of meeting WCAG 2.0 in PDF
- Guidance for software and document procurement
- Reduced liability exposure



CommonLook and PDF/UA

- NetCentric has produced accessible PDF files for years; CommonLook tools & services cover most of PDF/UA today
- PDF/UA creation, validation and remediation software is under development and will be available in 2013
- Existing CommonLook software customers with current maintenance and support will be upgraded at no charge



*So... PDF/UA is new.
That's nice.*

What's the solution today?



Review the Challenges

- Most people creating PDF files don't understand or practice accessible authoring, or lack capable software
- Many have software that can tag PDF files but don't know how to use it, so quality is low even when PDFs are tagged
- The Productivity Ribbon is a good first step, but doesn't necessarily produce reliably tagged and accessible PDF
- Adobe Acrobat does not provide a consistent, methodical process for checking and remediating PDF files
- Content Management Systems don't include a useful means of evaluating PDF files for accessibility



CommonLook Solves PDF Accessibility Problems



PDF Creation

- Authoring
- Preparation
- Generation



Remediation

- Verification
- Remediation
- Outsourcing



Management

- Awareness
- Management
- Training



CommonLook Office

- Works with Microsoft Word & PowerPoint
- Provides complete guidance prior to PDF creation
- Creates accessible PDF documents and forms



CommonLook Office - Features

- Task by task, checkpoint by checkpoint for easy learning
- All Section 508 (1194.22) checkpoints covered
- Powerful Regular Expression-based quality control mechanism for alternative text
- Complete table structure management, including “presentation” tables and tables with row headers
- Make accessible PDF forms from Word and PowerPoint
- Creates an accessible, Section 508 compliant PDF file once checkpoints are complete



CommonLook Office - Benefits

- **Methodical:** systematic approach ensures quality results
- **Structured:** reduces complexity for new users
- **Flexible:** includes power tools for advanced users
- **Cost-effective:** minimizes expensive verification work
- Increases awareness of accessibility requirements
- Leads to improved skills with MS Word and PowerPoint



CommonLook Office

The screenshot displays the CommonLook Office interface. On the left, there is a sidebar with a 'Reports' section. Below it, a green square icon is visible. A bar chart shows two categories: 'Files' with a value of 517 and 'Forms' with a value of 15. The main window is titled 'CommonLook Office - Checkpoints'. The breadcrumb path is 'Content Preparation > Word > Logical Heading Levels'. A yellow message box states: 'Check for headings, ensure heading levels are not skipped. [More...](#)'. Below this, there are three buttons: 'All Checkpoints', 'Current Checkpoint', and 'Checkpoint Preferences'. A red 'X' icon indicates an error: 'One or more heading levels are skipped.' Below the error message, it says 'Headings identified in this document. Errors are noted.' A list of headings is shown, with the first one highlighted in blue: 'Heading 1 (PDF Tag: H1)'. The following items are: 'Heading 3 (PDF Tag: H3) - Heading level skipped', 'Heading 3 (PDF Tag: H3)', 'Heading 3 (PDF Tag: H3)', 'Heading 4 (PDF Tag: H4)', 'Heading 4 (PDF Tag: H4)', 'Heading 4 (PDF Tag: H4)', and 'Heading 4 (PDF Tag: H4)'.

PDF Creation Solutions



CommonLook Office

COMMONLOOK PDF

help

Our complimentary CommonLook Clarity scan, summary and reports

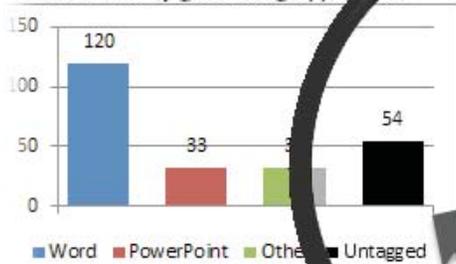
CommonLook Clarity analyzes PDF files posted online for accessibility characteristics. The software generates several reports for management, auditing and other purposes. Use CommonLook Clarity to identify PDF documents failing accessibility standards and identify files requiring human verification.



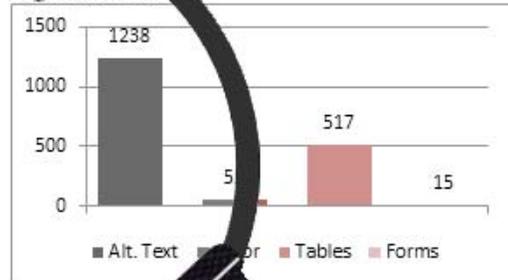
Verification Domain: [ADD-DOMAIN-HERE](#)

Total number of documents: 142 Total number of pages: 1659

PDF files found by generating application



Pages with Errors



Reports include links to files that require checking or correction



CommonLook Clarity provides six customizable CommonLook Reports

Report Name	Number of Pages	Number of Errors	Number of Files	Number of Links	Number of Images	Number of Tables	Number of Forms
Alt. Text	1238	1238	1	0	0	0	0
Color	5	5	1	0	0	0	0
Tables	517	517	1	0	0	1	0
Forms	15	15	1	0	0	0	1

CommonLook Office - Checkpoints

Section 508 > 1194.22 > (c) Color

If color is used to convey information, ensure that the information is also provided by other means. [More...](#)

All Checkpoints Current Checkpoint

Pages with Color:

Page 1



How CommonLook Office Helps

-  Most people creating PDF files don't understand or practice accessible authoring, or lack capable software
-  Many have software that can tag PDF files but don't know how to use it, so quality is low even when PDFs are tagged
-  Tools like the Productivity Ribbon are a good first step, but don't necessarily produce reliably accessible PDF files
 -  Adobe Acrobat does not provide a consistent, methodical process for checking and remediating PDF files
 -  Content Management Systems don't include a useful means of evaluating PDF files for accessibility



CommonLook PDF

- Works with Adobe Acrobat Professional
- Professional-strength checking and correction for existing PDF documents and forms
- Powerful, comprehensive table structure editor



CommonLook PDF - Features

- Automatically detects and repairs common problems
- “Pass” or “Fail” documents, pages or individual objects (Figures, use of color to convey information, etc)
- Powerful, comprehensive table structure editor (Complete control over cell type, span, scope, ID and more)
- Detailed reports at the object, page and document level
- Replace acronyms and abbreviations with alternate text
- Re-orders page content to follow logical order



CommonLook PDF - Benefits

- Speeds validation and correction of tagged PDF files
- Quickly resolves table structures in seconds vs. minutes with Adobe Acrobat Professional alone
- Improves the user experience even for users with software that doesn't understand PDF tags
- Reports facilitate logging, auditing & quality control



CommonLook PDF

Your complimentary CommonLook Clarity scan, summary and reports

CommonLook Clarity analyzes PDF files posted online for accessibility characteristics. The software generates several reports for management, auditing and other purposes. Use CommonLook Clarity to identify PDF documents failing accessibility standards and identify files requiring human verification.

Verification Domain:

Total number of documents:

142

Total number of pages: 1659

PDF files found by generating application

Pages with Errors

Reports include links to files that require checking or correction

Logical

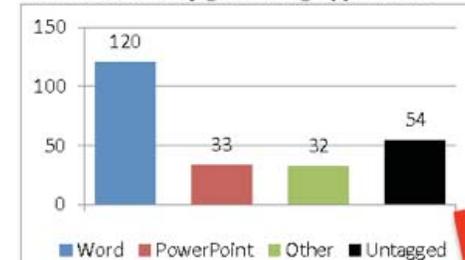
Ind...	Check...	Status	Description	Remarks
(c) Col...	User ...	User ...	Please ensure that all information conveyed with color is ...	
(d) Re...	User ...	User ...	Please verify that the logical structure of the page corres...	
(g & h...	Failed	Failed	Cell (1,1) does not have column header in table (1)	
(g & h...	Failed	Failed	Cell (1,2) does not have column header in table (1)	
(k) Te...	User ...	User ...	Choose not applicable if this document is accessible. Pa...	

Your complimentary CommonLook Clarity

CommonLook Clarity analyzes PDF files posted online for accessibility characteristics. The software generates several reports for management, auditing and other purposes. Use CommonLook Clarity to identify PDF documents failing accessibility standards and identify files requiring human verification.

Total number of documents: 142 Total number of pages: 1659

PDF files found by generating application



Reports include links to files that require checking or correction



CommonLook Clarity provides six customizable CommonLook Reports.

Types of Reports



CommonLook PDF

Data Table

Please review the logical structure of the table and make sure that each cell has at least one column header and one row header.

Logical Structure

Table Number: 1

		Imported			Domestic		
		Apricots	Cherries		Apricots	Cherries	
			"A" Grade	"B" Grade		"A" Grade	"B" Grade
Perth	Whole Sale	\$1.00	\$9.00	\$6.00	\$1.20	\$13.00	\$9.00
	Retail	\$2.00	\$12.00	\$8.00	\$1.80	\$16.00	\$12.50
Adelaide	Whole Sale	\$1.20	N/A	\$7.00	\$1.00	\$11.00	\$6.00
	Retail	\$1.60	N/A	\$11.00	\$2.00	\$13.00	\$10.00

Table Properties | Cell Properties | Physical View

Cell Type: Table Header Cell | Scope: Column

Col Span: 1 | Row Span: 1

Speak Text:

Linked Headers:

Modify

Passed | Failed | Cancel | End Verification

Examples of Tables

Presentation Table:

This is a test for a presentation table. The table is just used to create 2 columns effect. This is the second column of the table. Again, used for a column effect.

Simple Table:

Quantity	Price
	\$10
0	\$9
0	\$8
0 or more	\$7

Complex table

		Imported			Domestic		
		Apricots	Cherries		Apricots	Cherries	
			"A" Grade	"B" Grade		"A" Grade	"B" Grade
Perth	Whole Sale	\$1.00	\$9.00	\$6.00	\$1.20	\$13.00	\$9.00
	Retail	\$2.00	\$12.00	\$8.00	\$1.80	\$16.00	\$12.50
Adelaide	Whole Sale	\$1.20	N/A	\$7.00	\$1.00	\$11.00	\$6.00
	Retail	\$1.60	N/A	\$11.00	\$2.00	\$13.00	\$10.00



How CommonLook PDF Helps

- Most people creating PDF files don't understand or practice accessible authoring, or lack capable software
- Many have software that can tag PDF files but don't know how to use it, so quality is low even when PDFs are tagged
- Tools like the Productivity Ribbon are a good first step, but don't necessarily produce reliably accessible PDF files
- ✓ Adobe Acrobat does not provide a consistent, methodical process for checking and remediating PDF files
- Content Management Systems don't include a useful means of evaluating PDF files for accessibility



CommonLook Clarity

- Scans websites and folders to locate PDF files
- Interrogates PDF files at document, page and object levels
- Generates both summary and actionable reports



PDF Management Solutions



CommonLook Clarity - Features

- Detailed control over website spidering to set report scope
- Schedule scans daily, weekly, monthly or immediately
- Incremental vs. Full scanning options to reduce loads
- Individual checkpoint configuration options
- Report total files & pages, secured and corrupt files
- Report source, contents, existing accessibility features
- Report accessibility errors & content requiring human review
- Six types of reports:

Institutional, Document, Summary, Active, Status, Detailed

PDF Management Solutions



CommonLook Clarity - Benefits

- Provides objective data for assessing PDF accessibility
- Helps direct training and remediation resources
- “Active” report is linked; ready for use by remediators
- Extracts alt. text from figures for high-level quality control
- Tracks progress towards compliance objectives
- Tracks verification by CommonLook Office and PDF
- Spot patterns from detailed object-level reports
- Enterprise class solution for sites up to millions of PDFs



CommonLook Clarity

Summary Institutional Status Report

Section 508-Standard 1194.22

Serial	Domain Name	Root URL	Total Pages	Pages Failing							
				a) Text Tags	b) Multimedia Presentation	c) Color	d) Readability	e) Server-side image maps	g & h) Data Tables	j) Flicker	k) Alter
1	adobe.com	http://www.adobe.com/accessibility/	1659	1238	0	0	1234	0	517	0	0
2	CommonLook	http://www.commonlook.com/commonlook-software-services-and-training-for-accessible.pdf	102	5	0	0	0	0	0	0	0

Document Source

Serial	Domain Name	Root URL	Total Number of Files	Document Source				Verified by		
				MS Word	MS PowerPoint	MS Excel	Other	CommonLook PDF	CommonLook Office	Common Clarity
1	adobe.com	http://www.adobe.com/accessibility/	142	120	0	0	22	0	0	142
2	CommonLook	http://www.commonlook.com/commonlook-software-services-and-training-for-accessible.pdf	10	1	2	0	7	0	0	10





CommonLook Clarity

Summary Document Compliance Status Report

Metric	Count
Figures	1
Figures Lacking Textual Description	0
Tables	5
Tables Lacking Heading Information	0
Form Elements	0
Untagged Form Elements	0
Form Elements Lacking Tool Tips	0
Radio Buttons (Need to be Converted to Forced Checkboxes)	0
Multimedia Elements	0
Scripts	0
Elements with Potential to Flicker	0
Elements that May Require a Timed Response	0
Server-side Image Maps	0
Untagged Elements	765
Pages failing the Color Checkpoint	0
Pages failing the Navigational Links Checkpoint	0
Pages failing the Readability Checkpoint	0



CommonLook Reports

- **Report Content:** number of files, pages, images, tables, form fields, untagged content, pages inc. color, scripts, etc.
- **Report Problems:** number of images w/o alt. text, tables w/o headers, fields w/o labels, pages failing checkpoints
- Report on entire websites or folders (CommonLook Clarity) or individual files (CommonLook PDF)





CommonLook Reports

- **Institutional Report**
Current compliance status across all Verification Domains
- **Document Report**
Compliance statistics for a specific document
- **Summary Report**
Current compliance status for a single Verification Domain
- **Active Report**
Lists PDF files based on specified characteristics
- **Automated Status**
Automated test results for a specific Verification Domain
- **Detailed File Status**
Document, Page and Object-level detail on checkpoint failures



How CommonLook Clarity Helps

- Most people creating PDF files don't understand or practice accessible authoring, or lack capable software
- Many have software that can tag PDF files but don't know how to use it, so quality is low even when PDFs are tagged
- Tools like the Productivity Ribbon are a good first step, but don't necessarily produce reliably accessible PDF files
- Adobe Acrobat does not provide a consistent, methodical process for checking and remediating PDF files
- ✓ Content Management Systems don't include a useful means of evaluating PDF files for accessibility



CommonLook Services

- Cost-effective, quick and certain remediation of PDF documents and forms
- High-volume capacity (thousands of pages / day)
- Create interactive fillable forms from plain PDF pages
- Files perform well with software that doesn't use PDF tags
- PDF/UA Compliance Services coming soon
- Available WCAG 2.0 Level AA service
- Guaranteed satisfaction



CommonLook Training

- Basic accessibility with Microsoft Word and PowerPoint
- Accessible PDF creation with CommonLook Office
- Easing the learning-curve with CommonLook PDF
- Managing electronic documents with CommonLook Clarity
- Develop expert skills to speed through demanding tasks
- Become certified as a CommonLook Trainer



CommonLook Solutions for Accessible PDF

www.CommonLook.com



More Information

