

PDF/UA as a means to Section 508 compliance

Shannon Kelly – Actuate
Jeff Williams – Actuate



PDF/UA as a means to Section 508 compliance

Agenda

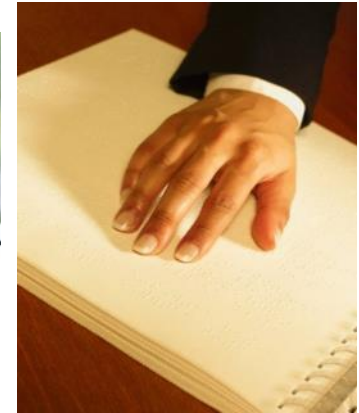
- Who needs accessibility?
- What makes a document accessible?
- What is WCAG 2.0?
- What is PDF/UA?



Who Needs Accessibility?

User Types

- According to the US Census, 56.7 million Americans (18.7% of the US population) had some type of disability in 2010
- Disability types include:
 - Blind
 - Low Vision
 - Deaf/Hard of Hearing
 - Impaired Mobility
 - Cognitive/Learning Disabilities
 - Speech Impairments
 - Age-Related Limitations



Who Needs Accessibility?

Vision Loss Problem

Over 20 million Americans have blindness, low vision, or trouble seeing.

Driving Factors:

- Increasing web self-service, self-engagement
- There is legislation mandating accessibility
- There have been several successful settlements regarding accessible online content- including electronic documents
- The operational cost and time associated with manually addressing document remediation is very high
- Individuals are required to self-identify to receive accessible content
- Alternate formats and manual remediation typically results in severe delivery delays for self-identified customers



Implementing Accessibility

Traditional Accessibility Options for the Organization

- Braille
 - 6.6 million legally blind people living in America
 - <10% of America's vision impaired people can read Braille
- Spoken Word Audio
 - Benefits sighted and reading impaired
- Large Print / High Contrast
 - Benefits low vision
- PDF Remediation
 - Manual tagging of PDF documents

Legislation

United States

- US Rehabilitation Act – Section 508
 - Requires that Federal agencies' electronic and information technology is accessible to people with disabilities
- Americans with Disabilities Act (ADA)
 - ADA Title II
 - Requires that State and local governments give people with disabilities an equal opportunity to benefit from all of their programs, services, and activities
 - ADA Title III
 - Requires that businesses and non-profit service providers provide goods and services in an integrated setting, unless separate or different measures are necessary to ensure equal opportunity.

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- Who needs accessibility?
- What makes a document accessible?
- What is WCAG 2.0?
- What is PDF/UA?



Implementing Accessibility

How Do Blind People “Read” PDF Documents?

- People with blindness, low vision, dyslexia, cognitive disorders and other print or visual disabilities use assistive technologies to operate computers and access digital information
- A Screen Reader is a type of Assistive Technology
- Screen Reader Software:
 - Audibly announces data and commands otherwise visually displayed
 - Allows for access to, navigation of and use of digital data
 - Navigates documents audibly as they would be navigated visually
 - Effective when web, applications, documents, etc. include accessibility features (compliant with Accessibility Standards and Regulations)

Implementing Accessibility

What are Accessible Documents?

- An accessible document can be used equally by any individual regardless of physical or cognitive disability
- Documents need to be in formats that enable individuals with reading impairments to use them
- Accessible documents need to have:
 - Clear and unambiguous language
 - Usable Navigation
 - Effective Design
 - Accessible by users of Assistive Technologies

Implementing Accessibility

What is PDF Accessibility?

- Accessible PDF Documents:
 - Are barrier-free PDFs - universally Accessible and usable by persons with and without disabilities
 - Are compatible with Assistive Technology
 - Contain proper tagging, markup, and structure
 - Allow access to, navigation of, and full use of the document
 - Are compliant with WCAG 2.0, Level AA or higher
 - Have an identical top image layer as non-accessible, or poorly accessible PDFs



PDF/UA as a means to Section 508 compliance

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- Who needs accessibility?
- What makes a document accessible?
- **What is WCAG 2.0?**
- What is PDF/UA?



Implementing Accessibility

Web Content Accessibility Guidelines (WCAG) 2.0

- World Wide Web Consortium's (WC3) Web Content Accessibility Guidelines is a set of universally spanning Guidelines for Web Accessibility.
 - The application of WCAG 2.0 to other electronic content technologies requires interpretation to determine how to apply Principles, Guidelines and Success Criteria. There are instances in which a 1:1 mapping does not exist, and in many cases, such as in PDF, it is generally appropriate to consult the accessibility standard (if any) developed specifically for that technology.¹
- Continually evolving with technology (WCAG 1.0 previous, current WCAG 2.0 published 2008).
- Most all Accessibility requirements, standards and laws have or are normalizing to WCAG 2.0 Level AA
 - The criteria for web-based technology and information are based on access guidelines developed by the Web Accessibility Initiative of the World Wide Web Consortium²

¹ <http://www.aiim.org/Research-and-Publications/standards/committees/PDFUA/WCAG20-Mapping>

² <http://www.section508.gov/summary-section508-standards#web>

Implementing Accessibility

Web Content Accessibility Guidelines (WCAG) 2.0

- Web Content Accessibility Guidelines (WCAG)
 - Wide range of recommendations for making Web content more accessible
 - WCAG 2.0 success criteria are written as testable statements that are not technology-specific
 - WCAG 2.0 is broken down into:
 - Principles: There are 4 top level principles
 - Guidelines: 12 Guidelines are organized within the 4 principles
 - Success Criteria: Each guideline contains testable success criteria
 - Sufficient and Advisory Techniques: Each guideline and success criteria has a wide variety of techniques documented.

Implementing Accessibility

WCAG 2.0 Levels of Compliance

- There are 3 levels of compliance to WCAG 2.0 Guidelines
 - A, AA and AAA
 - Each conformance level includes the requirements of the previous level (i.e. AA compliance includes all of the A success criteria plus the AA success criteria)
- Each Guideline contains the success criteria for each level (if applicable) . For Example:
 - Guideline 1.4 contains 2 level A criteria, 3 AA criteria and 4 AAA criteria
- Not all guidelines are applicable to all web formats.
 - To see what guidelines must be met for each format, go to <http://www.w3.org/WAI/WCAG20/quickref/Overview.php>

Implementing Accessibility

Principles

1. Perceivable

- Information and user interface components must be presentable to users in ways they can perceive.

2. Operable

- User interface components and navigation must be operable.

3. Understandable

- Information and the operation of user interface must be understandable.

4. Robust

- Content must be robust enough that it can be interpreted reliably by a wide variety of user agents, including assistive technologies.

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Implementing Accessibility

PDF/UA

- Published as an International Standard in 2012, ISO 14289-1:2012 (PDF/UA) was initiated by AIIM and Adobe Systems in 2004 to provide clear normative terms for achieving accessibility in the PDF format.
- ISO 14289-1 (PDF/UA-1)
 - A Companion standard, to be used in conjunction with ISO 32000, ISO 19005, ISO 15930 and other standards (2012)
- A technical standard providing code-level requirements for PDF software developers implementing PDF writing and processing software, as well as the PDF viewers and AT (Assistive Technology)

Implementing Accessibility

PDF/UA

- PDF/UA includes three key sections of requirements. Section 7 is dedicated to the file-format itself while Section 8 is dedicated to PDF reader software. Section 9 is directed at assistive technologies (AT) delivering the reader software's output to the user.
- PDF/UA and WCAG 2.0 are complementary with no conflicts. Conformance with one, however, does not guarantee conformance with the other.
- **“PDF/UA makes certain that the PDF format isn’t the source of accessibility problems.”**

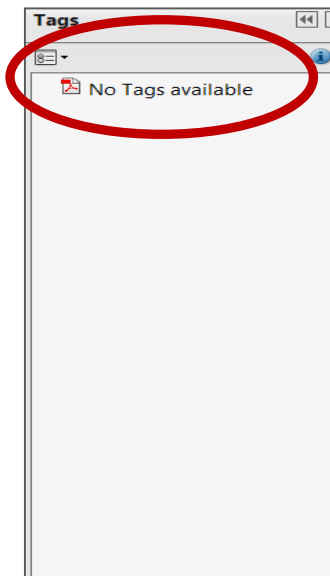
source: Matt May, Adobe Accessibility Evangelist, June 2013

Implementing Accessibility

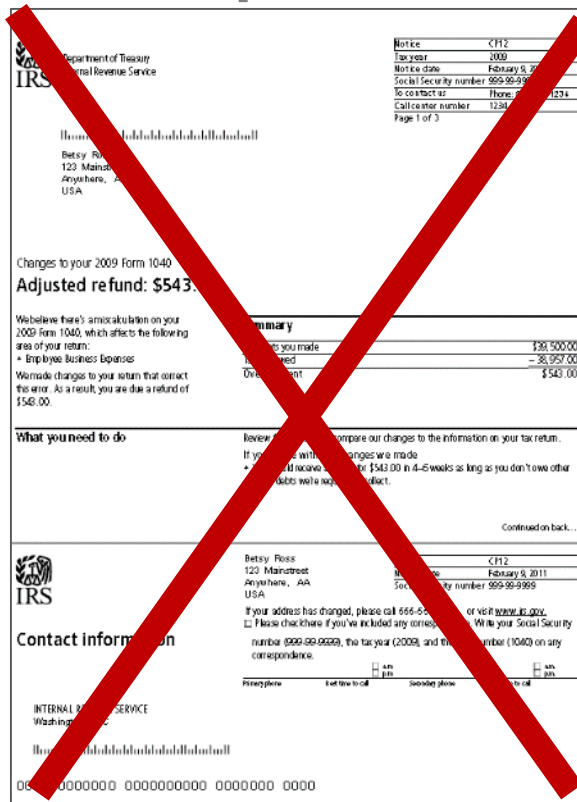
Untagged PDF

Not Accessible, Navigable or Usable by Screen Reader User

PDF Tags



Sample PDF



Screen Reader AT



Implementing Accessibility

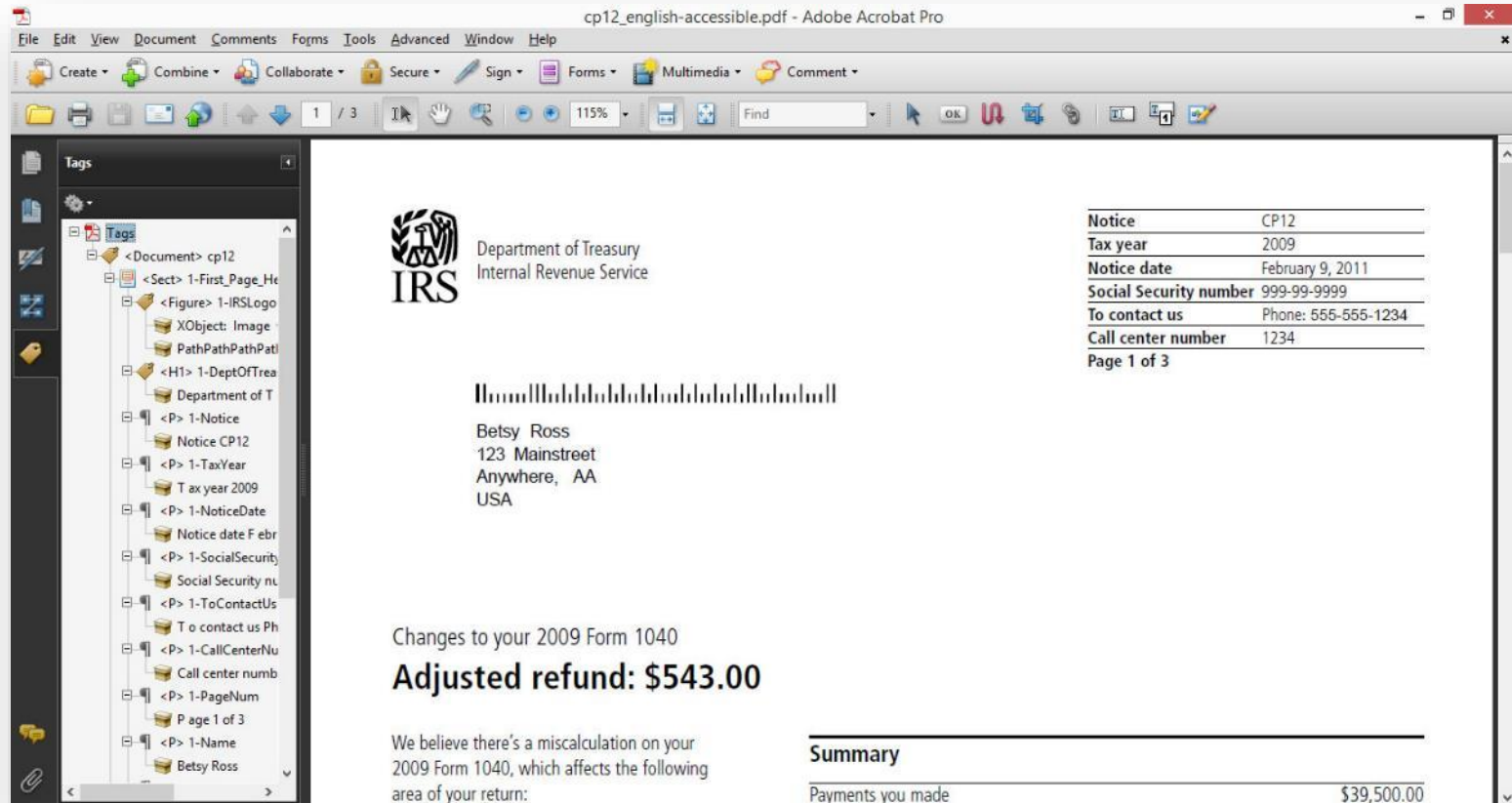
PDF/UA Structure

PDF Elements for Structure

- Properties & Fonts
- Language
- Bookmarks
- Tab & Read Order
- Images & Alt Text
- Text and Headings
- Lists
- Tables
- Forms
- Links (internal and external)

Department of Treasury Internal Revenue Service		Notice CP12 Tax year 2009 Notice date February 9, 2011 Social Security number 999-99-9999 To contact us Phone: 855-655-1234 Call center number 1234 Page 1 of 3													
<p>Betsy Ross 123 Mainstreet Anywhere, AA USA</p>															
<p>Changes to your 2009 Form 1040 Adjusted refund: \$543.00</p>															
<p>We believe there's a miscalculation on your 2009 Form 1040, which affects the following area of your return: + Employee Business Expenses We made changes to your return that correct this error. As a result, you are due a refund of \$543.00.</p>		<p>Summary Payments you made Tax you owed Over payment</p>													
<p>What you need to do</p>		<p>Review this notice If you agree with the changes, you should receive your refund or credit within 60 days.</p>													
<p>Contact information</p>		<p>Betsy Ross 123 Mainstreet Anywhere, AA USA If your address has changed, please check the number (999-99-9999) on the correspondence.</p>													
<p>INTERNAL REVENUE SERVICE Washington, DC</p>		<p>Primary phone</p>													
<p>0000 00000000 0000000000 00000000 0000</p>															
<p>Changes to your 2009 tax return</p>		<p>Information was changed because of the following: + We didn't allow the amount claimed as other credits on page 2 of your tax return because Form 3800, General Business Credit, and/or supporting documentation was incomplete or not attached to your tax return.</p>													
<p>Your tax calculations</p>		<table border="1"><thead><tr><th>Description</th><th>Your calculation</th><th>IRS calculation</th></tr></thead><tbody><tr><td>Adjusted gross income, line 37</td><td>\$194,542.00</td><td>\$194,542.00</td></tr><tr><td>Taxable income, line 43</td><td>15,261.00</td><td>58,383.00</td></tr><tr><td>Total tax, line 60</td><td>\$35,273.00</td><td>\$38,957.00</td></tr></tbody></table>		Description	Your calculation	IRS calculation	Adjusted gross income, line 37	\$194,542.00	\$194,542.00	Taxable income, line 43	15,261.00	58,383.00	Total tax, line 60	\$35,273.00	\$38,957.00
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Proper Tagging Structure



PDF with proper tag structure, and logical read and tab order.

Includes all PDF elements defined with appropriate tags for text, headings, images/figures, tables, links, etc.

Implementing Accessibility

Matterhorn Protocol

- To assist vendors in creating PDF/UA documents, the PDF Association published the Matterhorn protocol which consists of 31 Checkpoints comprised of 136 Failure Conditions.
- Enables PDF Producers to automate many aspects of accessibility but the range of necessary checkpoints is extensive and human judgment is required in many areas.
- Organizations committed to providing accessible electronic documents require a cost-effective means of ensuring their document's accessibility features are adequate.
- Intended for software developers and document testers, the Matterhorn Protocol is designed to foster PDF/UA adoption

Additional Resources

- <http://www.pdfa.org/publication/the-matterhorn-protocol-1/>
- <http://www.aiim.org/Research-and-Publications/standards/committees/PDFUA/WCAG20-Mapping>
- <http://www.section508.gov/summary-section508-standards#web>
- <http://www.w3.org/TR/WCAG20/>

Questions?



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