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- The session is scheduled to begin at 1:00pm Eastern Time.
- We will be testing sound quality periodically.
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Customize Your View



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The default is "fit page".



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Customize Your View, *continued*



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- Email: info@adaconferences.org; or
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Welcome

This webinar is part of a series showcasing "Best Practices in Federal Section 508 Implementation". Other presentations can be viewed at:

- www.adaconferences.org/CIOCArchives and
- www.fedlink.org/allqual/resource-shared-webinars.cfm

- A best practice is a policy, process, procedure or technique proven effective over time and repeatable by multiple agencies.
- A best practice is generalized so that diverse agencies may use it in their own organizations but specific enough to provide useful guidance and instruction.
- The CIO Council's Accessibility Community of Practice has published a library of 508 Best Practices at www.Section508.gov.

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Section 508 Best Practices Webinars

Webinars are bi-monthly:

- January, March, May, July, September, November

Next Webinar: November 26, 2019

- Topic: Section 508 in the Acquisition Lifecycle
- Time: 1:00 to 2:30 p.m. Eastern

This webinar series is a collaborative program between the Accessibility Community of Practice of the CIO Council and The U.S. Access Board.

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This webinar is brought to you by



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Evaluating Websites for Accessibility under the Section 508 Standards

Bruce Bailey, Information Technology Specialist, US Access Board

Katherine Eng, Senior ICT Accessibility Specialist, US Access Board

CIOC Section 508 Best Practices Webinar Series
September 24, 2019

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Session Agenda

- Quick Background / Reminders
- When talking 508, why talk about WCAG?
- What language to have in grant or contract?
- Web Accessibility Overview
- How can I tell if my website has accessibility issues?

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Background

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Web accessibility is not new!

- Trace Center initiated "Unified Web Site Accessibility Guidelines"
 - Central Reference Document, June 1997, version 7.2
- Web Content Accessibility Guidelines 1.0
 - W3C Recommendation, May 1999
 - www.w3.org/tr/wcag10
- Original Section 508 Standards, December 2000
 - 1194.22 Web-based intranet and internet information and applications
 - www.federalregister.gov/d/00-32017

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Standards Refresh

- Web Content Accessibility Guidelines 2.0
 - W3C Recommendation, December 2008
 - www.w3.org/tr/wcag20
- U.S. Access Board
 - Revised Section 508 Standards, January 2017
 - Phrase we have been using is "ICT Refresh"
 - www.access-board.gov/508
- W3C work continues (does not affect 508)
 - WCAG 2.1 W3C Recommendation, June 2018
 - www.w3.org/tr/wcag21

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Are non-federal websites required to comply with Revised 508 Standards?

- Section 508 applies only to federal agencies when they procure, use, develop, or maintain ICT
 - Section 508 itself does not apply beyond the federal government
- In some cases, compliance with the 508 Standards may be required by other rules and regulations
- The 508 Standards can serve as useful guidance for other entities in providing access

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Why talk about WCAG?

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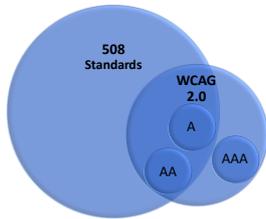
Revised 508 Standards: Broad Application of WCAG 2.0

WCAG 2.0 Level A and AA Success Criteria and Conformance Requirements applied to:

- Web content (e.g. online instructional materials)
- Covered non-Web documents (e.g. instructional materials)
- Software user interfaces (e.g. learning management systems)

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Revised 508 Incorporation By Reference (IBR) of WCAG 2.0



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WCAG 2.0: An International Standard

WCAG 2.0 background and development

- Represents an international, multi-stakeholder consensus
- Adopted or referenced by many countries and organizations
- Endorsed by International Standards Organization
 - ISO/IEC 40500:2012

Standards harmonization advances accessibility

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WCAG Features

- WCAG 2.0 success criteria (SC) are written as testable statements that are not technology-specific
- Each SC assigned a Level: A, AA, AAA
 - Revised 508 adopted Level AA (which includes Level A SC)
- WCAG structures provide built-in prioritization plan:
 - Four SC associated with Conformance Requirement 5 for Non-interference
 - Other Level A SC
 - Then the AA SC
 - Address AAA SC as resources allow

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WCAG Organization

- SC organized in four categories (“principles”):
 - Perceivable
 - Operable
 - Understandable
 - Robust
- SC numbering comes from those four principles
 - One or more “guidelines” under each principle
 - One or more SC under each guideline

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WCAG 2.0 Conformance

- Satisfy all success criteria at a given level
- Not applicable success criteria satisfied by default
- Conformance applies to entire page
- Some SC apply to multi-page processes

***Conformance at AA, or even AAA,
does not mean 100% accessibility!***

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Contract Language

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What **Not** to Do

- Skip mentioning 508. It's the law!
- Assume contract boiler plate is sufficient.
- Use vague or broad language
 - e.g., "Deliverables shall conform to Section 508"

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Good Examples

"Web database services provided under this contract shall conform to Level A and Level AA Success Criteria and Conformance Requirements in WCAG 2.0."

"Reports and other contract deliverables shall conform to Section 508 E205.4 Accessibility Standard."

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Examples, Continued

"Offeror shall describe the methodology they will use for validating that deliverables provide Level AA conformance with WCAG 2.0."

- Are the deliverables static?
 - What about maintenance?
 - Is there a need for on-going monitoring?

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Overview of Web Accessibility

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Getting Started Using WCAG 2.0

- W3C Web Accessibility Initiative (WAI) homepage:
 - www.w3.org/wai
- Recommend the WCAG 2.0 Overview:
 - www.w3.org/wai/standards-guidelines/wcag
- The standard is written to be a good starting point:
 - WCAG 2.0 introduction and [layers of guidance](#):
 - Principles, guidelines, success criteria, techniques
 - Each success criterion has contextual links for "Understanding" and "How to Meet"

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WCAG TOC is a Top 10 12 List!

- Provide **text alternatives** for non-text content
- Provide **captions and other alternatives** for multimedia
- Create content that can be **presented in different ways**, including by assistive technologies, without losing meaning
- Make it easier for users to **see and hear content**
- Make all functionality available from a **keyboard**
- Give users **enough time** to read and use content...

Source:

- www.w3.org/tr/wcag20/#contents

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WCAG Top 12 Cont.

...

- **Avoid content that causes seizures** or physical reactions
- Help users **navigate and find content**
- Make text **readable and understandable**
- Make content appear and operate in **predictable** ways
- Help users **avoid and correct mistakes**
- Maximize **compatibility** with current and future user tools

Source:

- www.w3.org/wai/standards-guidelines/wcag/glance

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Provide text alternatives

Guideline 1.1 Text Alternatives:

- Provide text alternatives for any non-text content so that it can be changed into other forms people need, such as large print, braille, speech, symbols or simpler language.
- “Descriptive Identification” versus “text alternative that serves the equivalent purpose”
- “Implemented in a way that it can be ignored by assistive technology”
 - if non-text content is pure decoration, or
 - is used only for visual formatting, or
 - is not presented to users

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Descriptive Identification

- Primarily intended to create a specific sensory experience
 - Could include maps and live video feeds
- Controls or accepts user input
 - has a **name** that describes its purpose
 - Additional requirements are under 4.1.x
- Time-based media
 - Additional requirements are under 1.2.x
- Tests or exercises
 - If they “would be invalid if presented in text”
- CAPTCHA
 - Additional requirement for alternative formats

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Text alternative that serves the equivalent purpose

- Long description
 - How would you describe over the phone to an informed colleague?
- Draw from experience with alternative formats
 - Translation to Braille and Audio
 - Formal guidance is available!
- Data tables
 - In addition to charts or graphs
- Exposition in body text
 - In addition to illustrations

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Provide captions and other alternatives for multimedia

Guideline 1.2 Time-based Media:

- Provide alternatives for time-based media.

- Videos (with non-trivial soundtrack) need captioning
- Videos need robust narration
 - i.e., audio description
- Transcripts are not an alternative to captioning or audio description

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Create content that can be presented in different ways, including by assistive technologies, without losing meaning

Guideline 1.3 Adaptable:

- Create content that can be presented in different ways (for example simpler layout) without losing information or structure

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Create content that can be presented in different ways

- Information, structure, and relationships conveyed through presentation
 - Are available to Assistive Technology
- When the sequence in which content is presented affects its meaning
 - A correct reading sequence is available to Assistive Technology
- Instructions provided for understanding and operating content
 - Do not rely solely on sensory characteristics of components
 - Such as shape, size, visual location, orientation, or sound

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Make it easier for users to see and hear content

Guideline 1.4 Distinguishable:

- Make it easier for users to see and hear content including separating foreground from background
- Don't only use color
- Limits on audio that plays automatically
- Minimum contrast value for text
- Text can be resized

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Make all functionality available from a keyboard

Guideline 2.1 Keyboard Accessible:

- Make all functionality available from a keyboard.
- "All functionality of the content is operable through a keyboard interface without requiring specific timings..."
 - Are features available without using a mouse?
- No keyboard trapping
 - Can you tab through the page (and back to start)?

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Give users **enough time** to read and use content...

Guideline 2.2 Enough Time:

- Provide users enough time to read and use content
- Limits on time limits
- Limits on moving, blinking, scrolling, and auto-updating information

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Avoid content that causes seizures or physical reactions

Guideline 2.3 Seizures:

- Do not design content in a way that is known to cause seizures
- Web pages do not contain anything that flashes more than three times in any one second period
 - or the flash is below the general flash and red flash thresholds

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Help users **navigate and find content**

Guideline 2.4 Navigable:

- Provide ways to help users navigate, find content, and determine where they are
- Pages have titles
- Heading and labels are descriptive
- Clear keyboard focus order
- Links are meaningful in context
- Repeated blocks can be skipped

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Make text **readable and understandable**

Guideline 3.1 Readable:

- Make text content readable and understandable
- Is the language used by blocks of text available to assistive technology?
 - So screen reading software has correct pronunciation!

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Make content appear and operate in **predictable ways**

Guideline 3.2 Predictable:

- Make Web pages appear and operate in predictable ways.
- Tabbing through page or form does not cause changes of content
- Navigation mechanisms and components are used consistently

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Help users **avoid and correct mistakes**

Guideline 3.3 Input Assistance:

- Help users avoid and correct mistakes
- Labels or instructions are provided for user input
- Automatically detected errors are described in text, and suggestions are provided when available
- For systems with legal or financial implications, users have a way to check, confirm, or reverse submissions

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Maximize **compatibility** with current and future user tools

Guideline 4.1 Compatible:

- Maximize compatibility with current and future user agents, including assistive technologies
- Nesting of elements, and use of ID attributes
- Name, Role, and Value of user interface components

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How can I tell if my website has accessibility issues?

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Triage Website Accessibility

- Easy Checks First
 - www.w3.org/wai/test-evaluate/preliminary
- WebAIM Quick Reference:
 - Testing Web Content for Accessibility
 - www.webaim.org/resources/evalquickref
- Scanning Tools
 - Automated tools cannot tell you if a page is accessible or compliant,
 - But can help identify impactful issues

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Scanning Tools

- Functional Accessibility Evaluator (FAE), Univ. of Illinois
 - <http://fae.disability.illinois.edu>
- WebAIM's WAVE — Web Accessibility Evaluation Tool
 - <http://wave.webaim.org>
- Accessible Name and Description Inspector (ANDI), SSA
 - www.ssa.gov/accessibility/andi

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508 Conformance Report

- Contractor should test for 508 conformance prior to delivery
- Require the test report as a deliverable
- Request a demonstration of accessibility and invite 508 SME to attend

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Questions from the Audience?



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Resources

Revised 508 Standards

www.access-board.gov -> [ICT Refresh](#) -> [Final Rule](#) -> [Single File Version](#)

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Contact us!

U.S. Access Board

800-872-2253 (voice), 800-993-2822 (TTY)

508@access-board.gov

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**Thank you for participating in
today's webinar**



Next session:

November 26, 2019

Section 508 in the Acquisition Lifecycle

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