WCAG 2.0
Web Content Accessibility Guidelines 2.0

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WCAG Background

- Web Content Accessibility Guidelines (WCAG)
  - How to make Web content more accessible
  - Addresses most disabilities
    - Visual
    - Auditory
    - Physical
    - Cognitive/Learning
    - Neurological
    - Language
  - WCAG 1.0: May, 1999
  - WCAG 2.0: December, 2008
WAI Accessibility Documents

- Web Accessibility Initiative (WAI) of the World Wide Web Consortium (W3C)
- Five “Essential Components of Web Accessibility”
  - **Web Content Accessibility Guidelines (WCAG) – 1999**
    - Information in a Web site
  - **Authoring Tool Accessibility Guidelines (ATAG) – 2000**
    - Software that creates Web sites
  - **User Agent Accessibility Guidelines (UAAG) – 2002**
    - Web browsers and media players
  - **Evaluation and Report Language (EARL) – Working Draft**
    - Web site evaluation test results
  - **Accessible Rich Internet Applications (WAI-ARIA) – WD**
    - Dynamic Web content/applications
Reasons for WCAG Revision

- **Web has evolved**
  - HTML is no longer the only game in town
  - AJAX, DHTML, XML, RIA (Java, Flash/Flex/AIR, Silverlight)
  - User agents have more control over content (“Until user agents...” in many WCAG 1.0 Checkpoints)

- **Browsers have advanced**
  - More standards-compliant, CSS support

- **Standards have changed**
  - Addition of XHTML, minor revision to HTML
    - HTML 4.0, CSS 2.0 > HTML 4.01, XHTML 1.0, XHTML 1.1
    - In Process: HTML 5.0, CSS 3.0, XHTML 2.0
Reasons for WCAG Revision

- **Adaptive technology has improved**
  - Support PDF, JavaScript, Flash, RIA
  - Adobe, Microsoft text-to-speech built-ins

- **Experience providing accessibility has grown**
  - Some requirements outdated
  - Some requirements reconsidered
  - Requests for greater specificity, more technical guidance
Changes in Technology

- **WCAG 1.0: May, 1999**
  - Windows 98 SE*, Mac OS 8
  - Internet Explorer 5*, Netscape 4.6
  - Desktop & Laptop Computers
  - Dialup Internet (56k)

- **WCAG 2.0: December, 2008**
  - Windows Vista, Mac OS X 10.6
  - Internet Explorer 7, Firefox 3, Safari 3, Chrome 1
  - Desktop & Laptop Computers, Netbooks, Tablets, PDAs, Mobile Phones, Game Consoles
  - High-speed Internet (fiber, cable, DSL); wireless/mobile
Microsoft invites you to visit the Microsoft booth at Networld+Interop May 11-13 for a sneak preview of Microsoft Windows 2000 and hands-on workshops demonstrating BackOffice Server 4.5 and Office 2000 as well as the latest in networking technologies.

- Office 2000 Wins Awards, Good Reviews, and Industry Accolades
- How microsoft.com Creates Effective Web Interfaces
- Celebrate Mother’s Day with Gifts, Stories, and More on MSN
- Service Pack 5 for Windows NT 4.0 Offers Updated Features
- Examine the Year 2000 Product Guide for Compliance Information
- Microsoft and The Magic School Bus Take Kids on a Wild Ride

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Changes in Approach

- **WCAG 1.0**
  - Primarily HTML-oriented

- **WCAG 2.0**
  - Language-agnostic (HTML, XHTML, RIA, etc.)
  - Technology- and device-independent
  - Future-oriented
    - Meeting some AAA Success Criteria is not yet possible
Organization

- WCAG 1.0
  1. Guidelines
  2. Checkpoints
  3. Techniques

- WCAG 2.0
  1. **Principles**
  2. Guidelines
  3. Success Criteria
  4. Techniques
    - Conformance Requirements
WCAG 2.0 Organization

• Four Nested Layers
  – **Principles (4)**
    • Format: “Principle 2”
    • Organizing concepts
  – **Guidelines (12)**
    • Format: “Guideline 2.1”
    • Basic goals – not directly testable
  – **Success Criteria (61)**
    • Format: “SC 2.1.3”
    • Testable requirements
    • Conformance Level A, AA, AAA (No “Priority #”)
  – **Sufficient and Advisory Techniques (264)**
    • Informative examples
1. Perceivable

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

1.1 Text Alternatives (1 SC)
- Provide text alternatives for any non-text content.

1.2 Time-based Media (9 SC)
- Provide captions and alternatives for audio and video content.

1.3 Adaptable (3 SC)
- Create content that can be perceived by all users when presented in different ways.

1.4 Distinguishable (9 SC)
- Make the default presentation easy to perceive.
2. Operable

“User interface components and navigation must be operable.”

2.1 Keyboard Accessible (3 SC)
   – Make all functionality keyboard accessible.

2.2 Enough Time (5 SC)
   – Provide users enough time to read and use content.

2.3 Seizures (2 SC)
   – Do not use content that may cause seizures.

2.4 Navigable (10 SC)
   – Help users navigate and find content and determine where they are.
3. Understandable

“Information and the operation of user interface must be understandable.”

3.1 Readable (6 SC)
- Make text content readable and understandable.

3.2 Predictable (5 SC)
- Make content appear and operate in predictable ways.

3.3 Input Assistance (6 SC)
- Help users avoid and correct mistakes.
4. Robust

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

4.1 Compatible (2 SC)

– Maximize **compatibility** with current and future technologies.
Conformance Requirements

1. Conformance Level
   - A = Minimum, AA = Recommended, AAA = Ideal
   - All Level A Success Criteria must be met to achieve Conformance Level A
     • CL AA requires all Level A & AA SC, CL AAA requires all A, AA, & AAA SC
   - Level AAA is not recommended/should not be required
     - Not always possible to meet AAA Success Criteria (yet)

2. Full Pages
   - All parts of a page must meet requirements to achieve conformance
Conformance Requirements

3. **Complete Processes**
   - All Web pages in a process (series of pages) must conform.

4. **Only Accessibility-Supported Ways of Using Technology**
   - Must satisfy criteria with methods supported by accessibility technologies.

5. **Non-Interference**
   - Non-accessible or non-conforming elements of pages do not interfere with accessibility of the rest of the page.
   - Non-essential technologies must not interfere when turned on, off, or unsupported.
   - SC 1.4.2, 2.1.2, 2.3.1, 2.2.2 apply to all content.
CR 5: Non-Interference

- **All** content must also meet these success criteria:
  - Audio Control (1.4.2)
  - No Keyboard Trap (2.1.2)
  - Three Flashes or Below Threshold (2.3.1)
  - Pause, Stop, Hide (2.2.2)
Success Criteria Levels

WCAG 1.0  WCAG 2.0
What does it mean for me?

- **Designers/Developers**
  - Greater freedom
  - Greater responsibility
  - Higher expectations
- **Individuals with Disabilities**
  - More usable Internet
- **Evaluators**
  - Requirements more precisely testable
10 Rules for Rich Internet Applications

1. Everything must be available from the keyboard (2.1)
2. Let users control the flow (1.4.2, 2.2)
3. “Text alternative” isn’t “alternative text” (1.1-2)
4. “Layout” isn’t just the way something looks (1.3)
5. If it’s interactive, it needs help (3.3)
6. Custom controls aren’t secret controls (4.1.2)
7. Don’t surprise users with changes (3.2)
8. Words are for everyone (1.4.3-4, 3.1)
9. “Button” isn’t a label, “Section 1” isn’t a heading (2.4.6)
10. New technologies aren’t exempt
10 Rules for Rich Internet Applications

1. Everything must be available from the keyboard (2.1)
   - If you need to use a mouse, it’s not accessible
10 Rules for Rich Internet Applications

2. Let users control the flow (1.4.2, 2.2)
   - Provide controls (e.g., pause/play) for anything timed (audio, video, slideshow, etc.)
3. “Text alternative” isn’t “alternative text” (1.1-2)
   - Controls and user inputs must have descriptive names
   - Provide captions or alternatives for audio/video (1.2)
   - Alternative CAPTCHAs are necessary
4. “Layout” isn’t just the way something looks (1.3)
   – Structure, relationships, and information must be programmatically determinable
5. If it’s interactive, it needs help (3.3)
   - Errors must be identified
   - Labels and instructions must be provided for user input
   - Errors should be prevented and suggestions provided
   - Context-sensitive help should be provided
6. Custom controls aren’t secret controls (4.1.2)
   - Controls must provide info to Assistive Technologies (AT)
   - Controls must be operable by AT
   - Focus must be programatically determinable and notifications are sent to user agents and AT
10 Rules for Rich Internet Applications

7. Don’t surprise users with changes (3.2)
   - Changing focus or input must not change context without warning
   - Navigation should be consistent across pages
8. Words are for everyone (1.4.3-4, 3.1)
   – Text should be resizable and high contrast
   – Language changes should be identified
   – Abbreviations and jargon should have definitions available
9. “Button” isn’t a label, “Section 1” isn’t a heading (2.4.6)
   – Use descriptive headings, labels, and titles
10 Rules for Rich Internet Applications

10. New technologies aren’t exempt
   - No free pass for cutting-edge
   - It may be new, but WCAG 2.0 already accounted for it
Web Resources

- Web Accessibility Initiative: http://www.w3.org/WAI/

- Web Content Accessibility Guidelines (WCAG): http://www.w3.org/TR/WCAG20/
  - Overview:  http://www.w3.org/WAI/intro/wcag
  - How to Meet:  http://www.w3.org/WAI/WCAG20/quickref/
  - Comparison of 1.0 and 2.0 Checkpoints:  http://www.w3.org/WAI/WCAG20/from10/comparison/

- How People with Disabilities Use the Web:  http://www.w3.org/WAI/intro/people-use-web.php
• Introduction to WAI-ARIA
  – Mike Elledge, Usability & Accessibility Center