IT Accessibility

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IT Accessibility CG

http://educause.edu/groups/itaccess
Types of Disabilities

• Physical
• Auditory
• Visual
• Cognitive
• (Age-Related)
What Percentage of People in the US have a disability?

• 2%
• 5%
• 10%
• 20%
Speech Recognition Software
Mouth Stick
Braille Display
Sip and Puff Switch
What is accessibility?

• All people, regardless of any impairment, can interact with your content

• Can your Web page be translated to work with these technologies?
Universal Design

"... the design of products and environments to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design."

– Ron Mace, Center for Universal Design, NC State University
Curb Cuts
Automatically Opening Doors
(Michael K. Young) We are committed to the notion that everyone should have an opportunity
Anticipating the User’s Need
Accessibility, The Law, and Standards

• Laws
  – Section 504
  – Americans with Disabilities Act (ADA)

• Federal Requirement/Standards
  – Section 508

• Standards
  – WCAG 2
Web Standards

• The meeting point between your Web page and the assistive technology vendor
WCAG 2 – Principles (POUR)

Perceivable  ➔ Can I “see” it?
Operable  ➔ Can I “touch” it?
Understandable  ➔ Can I understand it?
Robust  ➔ Can I break it?
POUR Examples

• Perceivable
  – Is there alternative text for images?

• Operable
  – Can I interact with it using only a keyboard?

• Understandable
  – Is the language of the page defined?

• Robust
  – Does it work with a wide range of assistive technologies?
Most Accessible Formats

Ranked from the easiest to the hardest make accessible:
1. HTML
2. Video/Audio
3. Office Documents
4. PDF
5. Rich Multimedia (i.e. Flash)
Accessibility Testing

• Combination of
  – Automated testing
  – Manual testing
  – User testing
A Workflow for Testing Accessibility

1. Run the WAVE Accessibility Toolbar to check for numerous errors
2. View a text-only version of the page with the WAVE Toolbar and confirm the contents are still in the right order
3. Try to complete all of the functions on a page using only the keyboard. Make sure you can see the visual focus and also select all items you can with a mouse
4. Run the Web Evaluation Tools to check for heading structure and ARIA landmarks
5. Spot check for color contrast
6. Run the W3C Validator
7. (optional) Run a tool like SortSite
WAVE Toolbar

- Missing alternative text
- Unlabeled form elements
- Gives warnings of items to manually check
- Color contrast (Web-version)
Accessibility in the Project Management Lifecycle

• Planning
  – Target Audience
  – Technologies You Will Use

• Implementation
  – Continuous testing of UI and User Interaction

• Testing
  – Automated and manual testing
  – Testing with people with disabilities
Resources

• IT Accessibility Constituent Group
  – http://educause.edu/groups/itaccess

• Web Accessibility Handbook
  – http://go.ncsu.edu/accessibility-handbook