Universal Learning: Achieving Accessibility and ADA Section 508 Compliance

Intranet and Internet Accessibility
Institutional, Curricular, and Pedagogical Impact
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SWALLT
PANEL PRESENTATION

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Format

- Slides will introduce facets and concerns relating to ADA Section 508 Compliance
- Some examples
- Experience from the panel and audience
- Discussion
ADA Section 508 - Overview

- Added by Congress to Title V of the Rehabilitation Act in 1986
- Local, State & Federal Agencies that procure, maintain and/or use Electronic and Information Technology (EIT) must provide equal access for all persons with disabilities
- 1996 Department of Justice ruling makes it clear that ADA accessibility requirements apply to Internet resources. (http://www.usdoj.gov/crt/foia/cltr204.txt)
- Accessibility is a universal issue that involves all disciplines
- Academic freedom VS statutory requirement
ITR: Compliance & Commitment

- Coordinate with contract vendors to obtain full list of accessible resources
- Seek out network solutions
- Secure alternative services when possible
- Provide appropriately equipped workstations
- Ensure training and technical support
- Promote commitment and accountability

In 2004, the California Virtual Campus (CVC Region 4) initiated the update and enhancement of the Web Accessibility Training Module developed for the California State University System through a Technology Integration Grant for Educational Resources (TIGERS) from the CSU Center for Distributed Learning and has published the updated materials.

http://host3.cvc4.org/learningmodules/
Understanding access limitations
http://www.webaim.org/info/asdvideo/

The major categories of disability types are:

- **Visual**
  - blindness, low vision, color-blindness

- **Hearing**
  - deafness

- **Motor**
  - inability to use a mouse, slow response time, limited fine motor control

- **Cognitive**
  - learning disabilities, distractibility, inability to remember or focus on large amounts of information
Visual Disabilities

http://www.vischeck.com

**Vischeck** simulates colorblind vision

**Daltonize** corrects images for colorblind viewers

The next time you go strawberry picking, imagine how much harder it would be if the fruit were the same colour as the leaves. If you are a man, there is a 10% chance that they are! So is this a problem you need to worry about?

- Strawberries as they would appear to someone who is red/green colorblind.
Common WWW Access Hazards

- Cannot see graphics because of visual impairments
- Cannot hear audio because of hearing impairments
- Slow Internet connections and modems will not allow for easy download of large files
- Poorly constructed/organized sites with unclear directions make navigation precarious for ESL individuals and for those with learning disabilities.
Access Mindful
Hardware and Software

Information delivery is dependant on appropriate Assistive Technology:

♦ Screen Readers & Magnification Devices

SIMULATION: [http://www.webaim.org/simulations/screenreader](http://www.webaim.org/simulations/screenreader)

♦ Close captioning & Video Description

Software that allow to create captioning and decoding for the hearing impaired
[http://www.CCmaker.com](http://www.CCmaker.com)

♦ Adaptive keyboards or keyboards overlay

♦ Alternative Augmentative Communications devices with programmed menus that allow non-verbal individuals to ‘speak’ aloud by pressing buttons.
Web Design Guidelines: keeping the user in mind

- Use written explanations – provide text equivalent for every non-text element (e.g. alt text)
- Employ simple designs, simple backgrounds with sufficient contrast, and a consistent structure – for ease of navigation through headings, lists, etc.
- Make sure that text and graphics can be understood without the use of color
- Summarize graphs and charts
- Avoid embedding textual information in graphics
- Use Unicode coupled with SVG, and SMIL to aid access to multilingual pages. These pages must have tags (e.g. change in language). Help for multilingual pages can be found at:
  http://www.w3.org/International

  Language pages may also need Ruby texts, techniques are discussed at:
  http://www.w3.org/TR/ruby/#non-visual

- To validate web sites, use tools, checklists, and guidelines at
  http://www.w3.org/wai

- Use standards HTML language as much as possible
- Create compliant ‘web page templates’ that can be used by non-web designers
  ex.  http://library.csun.edu/template.html
  www.csun.edu/~hffll002/mcll_template
Section 508 Plus
Governs all UW-Madison web pages
Some exemptions allowed

See http://babel.lss.wisc.edu/~lisa/fleat5.htm
Is the Policy Effective?

- **WebAIM Study**
  www.webaim.org/coordination/articles/policies-pilot

- **UW-Madison**
  - No system for evaluating or monitoring
  - No consequences for failure to comply
  - Decentralization of web editing
So Why Do People Bother?

- Many see web accessibility as an interesting problem to solve
- Many feel it is the right thing to do
- Some are afraid of lawsuits
Accessible web pages make information available to many types of learners using a wide variety of hardware, software and devices.
Curb Cuts in the Digital Language Lab
Example Curb Cut: Students with Visual Disabilities

Example Accommodation:

*Provide alternate text for all graphic images*

People who benefit from accommodation:

- *People who do not automatically load all images because of old or slower hardware*
- *People who use alternative devices (PDA, cell phone) to view web pages*
- *It can also improve search engine indexing*
6% of US students report having a disability

Of students reporting a disability:
  Learning disabilities 45.7%
  Mobility or orthopedic impairments 13.9%
  Health impairments 11.6%
  Mental illness or emotional disturbance 7.8%
  Hearing impairments 5.6%
  Blindness and visual impairments 4.4%
  Speech or language impairments 0.9%
  Other impairments 9.1%

Source: An Institutional Perspective on Students with Disabilities in Postsecondary Education, National Center for Educational Statistics, Postsecondary Education Quick Information System, August 1999.
Statistics: UW-Madison

Source: http://www.wisc.edu/adac/sectionthree.html
## Statistics: Wisconsin Ages 12-17

<table>
<thead>
<tr>
<th>Disability</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vision</td>
<td>200 or &lt;1%</td>
<td></td>
</tr>
<tr>
<td>Hearing</td>
<td>680 or 1%</td>
<td></td>
</tr>
<tr>
<td>Cognitive</td>
<td>6,466 or 11%</td>
<td></td>
</tr>
<tr>
<td>Emotional Behavioral</td>
<td>10,205 or 18%</td>
<td></td>
</tr>
<tr>
<td>Learning</td>
<td>31,954 or 56%</td>
<td></td>
</tr>
</tbody>
</table>

How to Get Started

- See [http://babel.lss.wisc.edu/~lisa/fleat5.htm](http://babel.lss.wisc.edu/~lisa/fleat5.htm)
- Find or create a policy.
  - If US and using W3C, know difference between W3C and 508.
    [http://www.jimthatcher.com/sidebyside.htm](http://www.jimthatcher.com/sidebyside.htm)
- Make all new web resources accessible (according to your policy).
- Prioritize the rest.
- Have a plan for handling requests for accommodations.
What is it like to use a talking browser?

Introduction to the Screen Reader
With Neal Ewers
(7 minutes 30 seconds)

Video can be viewed or purchased online at
http://www.doit.wisc.edu/accessibility/video/intro.asp
Accessibility Validation and Web Design Software

- **Dreamweaver**
  Web Design software with which to create accessible templates and more

- **Contribute 3 (from Macromedia)**
  Web page editor allows you to create templates. Not a full feature web site construction tool, it allows to edit and add pages to an existing web site.

- **LIFT text transcoder (from UsableNet)**
  Demo it at: http://www.usablenet.com/frontend/demoform.jsp?prod=tt
  LIFT is a solution that dynamically generates a text-mode and removes clutter, replaces confusing and disorienting navigation mechanisms, provides global alt tag substitutions and/or overrides failures to describe images, solves inappropriate use of colors and/or poor contrast between content and background allowing end user choices.

- **Bobby (repair tool) [Bobby 5.0 for Windows $299.00]**
  Comprehensive Web accessibility tool designed to help expose and repair barriers to accessibility. Tests for accessibility compliance at level 1, 2, & 3.

- **VISTA –WebCT Enterprise level software**
  Learning Management System (LMS) that provides accessibility features such as alt tag ability

- **Acrobat 7.0 (has accessibility Wizard built into it)**
Reference Materials & Resources

- EASI (Equal Access to Software and Information)

- International Center for Disability Resources on the Internet

- National Center on Accessible Information Technology in Education (AccessIT)

- National Center for Accessible Media (NCAM) resources

- W3C's Web Accessibility Initiative (WAI)
  [http://www.w3.org/WAI/](http://www.w3.org/WAI/)

- Web Accessibility in Mind (WebAIM)

- Microsoft and Section 508
  [http://www.microsoft.com/enable/microsoft/section508.htm](http://www.microsoft.com/enable/microsoft/section508.htm)
Conclusion and Discussion

- Institutional impact
- Curricular Impact
- Pedagogical Impact

The Web offers many new opportunities to students with disabilities that are unavailable through any other medium. It provides a method for education, communicating with the world, and accessing information. The Internet offers independence, infinite educational opportunities and freedom. Too many Web and LMS sites are not created with accessibility in mind, thus excluding the segment of our student population that would stands to gain the most from their use. By committing to accessibility and providing for accountability, training, and technical assistance, we harness the Web's full potential to the benefit of all our students and we create a true ‘learning centered’ environment.