

Websites Made for Every User

Kaela Parks, Director of Disability Support Services



Presentation includes:

Slides and Notes
Checklist for Site-Audits
Online Resource from AccessIT

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EASI Webinars on Related Topics

UAA maintains an institution-wide membership with EASI – Equal Access to Software and Information. Details about upcoming events are listed on our website, but there are also archives of recent webinars that may be of interest. Email Kaela at the address above to learn more.

Accessible and Usable PDF Documents
Captioning Educational Materials
Creating Accessible Forms for the Web
Cascading Style Sheets: What they are and how they affect accessibility

Web Accessibility for people of all abilities

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What is Accessibility/Usability

- Accessibility – often associated specifically with individuals who experience disabilities but can be used more broadly
- Usability – gets at the idea of making sure that something can be used as intended and that access is not unnecessarily impeded by barriers

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Usability as a Spectrum

Accessibility/Usability is not binary – not black and white – rather it is important to stay focused on minimizing barriers while recognizing that any given online offering/informational source will be more or less usable for any given individual depending on characteristics such as:

- Software/hardware configuration
- User preferences or needs
- Connection or processing speed

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Why Does it Matter?

There are many arguments that can be made in favor of good design practices that promote usability for a wide range of needs and accessibility for people with disabilities

- Legal
- Moral
- Business
- Self-Interest

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The Legal Argument

- According to Section 504 of the Rehabilitation Act and the Americans with Disabilities Act it is unlawful to discriminate on the basis of disability.
- Section 508 of the Rehab Act outlines specific mandates for online content published by the federal government - many states have adopted similar rules.
- Even in the absence of a formal mandate for all web designers now, many believe that with time this need will be more clearly articulated – see related course cases.

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The Moral Argument

Sites that are designed with accessibility in mind also provide a benefit for the community by honoring diversity through proactive planning. This approach provides clear benefits for:

- People with disabilities
- People learning English
- People with age related sensory declines
- Digital immigrants

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The Business Argument

Sites that are designed with accessibility in mind will also provide the following benefits for the sponsor or hosting entity:

- More hits in search engines
- Ability to reach a wider market share
- Increased positive regard

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The Self-Interest Argument

Sites that are designed with accessibility in mind will also provide the following benefits for the designer:

- Faster loading times
- Easier site maintenance
- Fewer requests for retroactive accommodation

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Who Benefits

- Information that is designed to be accessible for people with disabilities will also benefit a wide range of other users
- The population is varied and designers never know exactly who will be accessing information that is published online
- Users who run into barriers may just leave unsatisfied rather than declaring problems

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Key Issues for Usability

- Provide Simple and Intuitive Navigation
 - Ensure people can actually get what they came for
- Plan for Older/Emerging Technologies
 - Test with different browsers/connection speeds/displays
- Envision a wide range of users
 - Check out videos detailing user experiences
- Perform Web Accessibility Check
 - Download free toolbars
 - Use checklists for self-evaluation but also ask end-users

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The User Experience

- This WebAIM article includes two videos where people with disabilities are interviewed on camera. <http://www.webaim.org/intro/#people>
- You Tube has many videos created by frustrated web surfers and there are a lot of articles on the subject as well. A simple search should yield results but Disability Support Services is happy to help those looking for more examples.

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PDF Accessibility Concerns

- PDF is a very common format for uploaded content, but not all PDF are created equally
- The free Adobe Reader program provides nice options but they only work if the document is created with access in mind
- There are webinars, quick tip cards, and other resources available

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Audio/Video/Flash Content

- More sites are providing multimedia content.
- Ideally this content will be captioned or a transcript will be provided.
- If there is no captioning, and no transcript, then a clear statement indicating how to request an alternate format must be included.

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Checking Sites for Accessibility

- Free toolbars are available for browsers

Web Accessibility Toolbar for IE:

<http://www.visionaustralia.org.au/ais/toolbar/>

Web Developer's Toolbar for Firefox:

<https://addons.mozilla.org/enUS/firefox/addon/60>

- Checklists have been developed through the State of Alaska Initiative as well as through UAA

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Resources for Learning More

- Keeping Web Accessibility in Mind (12 minute video on bottom of page) <http://www.webaim.org/intro/>
- Screenreader Introduction Video (27 minute video from Yahoo designer who is blind) <http://www.theaccessibility.com/?p=166>
- Web Accessibility Initiative: Evaluating Web Sites for Accessibility: Overview <http://www.w3.org/WAI/eval/Overview.html>
- Using the AIS Web Accessibility Toolbar <http://www.webaim.org/articles/ais/>

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EASI Archives

- Web Accessibility Initiative <http://easi.cc/archive/wai2.htm>
- Introduction to the Web Content Accessibility Guidelines: a 4-part Series <http://easi.cc/archive/wcag2/resources.htm>
- Demystifying Designing Web Sites to Meet Accessibility Standards: a 4-part series <http://www.easi.cc/archive/webdev108/webdev108.htm>
- Illinois Functional Web Accessibility Evaluator 1.0 and Best Practices for Accessibility <http://easi.cc/archive/gunderson/gunderson.htm>

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Closing Thoughts

- Wide range of users to plan for
- Many arguments for good design
- Benefits impact users as well as designers
- Lots of resources to improve usability
- Usability is a spectrum and the idea is to continue moving in the right direction

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WCAG 2.0 (Level A) CheckList	
Success Criterion	Yes/No
1.1.1 Non-Text Content	All "Yes" to pass
Are you providing short descriptions?	
Are you providing long descriptions where they are needed?	
Are you labeling your form elements?	
Are you providing alternative options for CAPTCHA elements?	
Are you properly using the alt tag for inline elements that are not necessary for content? (alt=" " or alt="")	
1.2.1 Time-Based Media	One Yes Required.
Prerecorded Audio - Are you providing a text transcript?	
Prerecorded Video - Are you providing a text transcript for the audio content?	
Prerecorded Video - Are you providing an audio track that describes the important video content and describes it?	
Do you "NOT" have any audio or video tracks?	
1.2.2 Captions	All "Yes" to pass
Have you provided open or closed captions to media elements?	
1.2.3 Audio Description / Full Text Alternative	One Yes Required.
Are you providing media alternatives? Alternative spoken versions, alternative synchronized text versions or are you using SMIL 1.0 or 2.0?	
Do you "NOT" have any audio or video tracks?	
1.3.1 Info and Relationships	All "Yes" to pass
Are the semantic elements such as <a>, <blockquote>, , , <cite> and <caption>, <dfn>, <code>, <samp>, <kbd>, <var>, <abbr> and <acronym> used appropriately?	
Are you using H1-H6 to identify headings?	
Do you have labels associating text to form controls?	
Are you using ol, ul and dl for lists?	
Are you using table markup TH, Thead, TR, TD, Tfood, Tbody, scope inside your tables?	
Are you using a description, fieldset, legend for your form controls?	
Are you separating information and structure from presentation to enable different presentations? (HTML and CSS usage).	
Are you using standard text formatting for paragraphs? (Spacing between paragraphs, indenting if needed.)	
Are you using standard text formatting for lists?	
Are you using standard text formatting for headings?	
Are you using either readable layouts for your "tabular data" or are you putting tabular data within tables that are readable by a screen reader?	
1.3.2 Meaningful Sequence	All "Yes" to pass
IF you are changing the text direction, are you using left-to-right (RLM) or right-to-left (LRM) markup?	
Are you utilizing the dir attribute on inline elements to resolve problems with nested directional runs?	
Are you positioning your content based on structural markup?	
If you are changing your word or letter spacing, are you doing this with CSS?	
1.3.3 Sensory Characteristics	All "Yes" to pass
Are you providing textual identification of terms that would otherwise require sensory information to be understood?	
1.4.1 Use of Color	All "Yes" to pass
Are you ensuring that information that is conveyed by color is also available by text?	
Are you including text cues whenever color cues are used?	
Are you ensuring that when color differences are used to convey information that the style is also visually differentiated without color differences?	
IF you are using color in images to convey information, are you using pattern elements as well?	
1.4.2 Audio Control	One Yes Required.
If you have audio on your website are you playing it and then turning it off automatically after three seconds? Or	
Are you playing sounds only on user request? Or	
Are you providing a control (towards the top of the page) that allows the user access to turn on/off the sounds that play automatically? Or	
Are you providing a user interface control that allows the user to pause or stop a synchronized media event?	
Do you "NOT" have any audio or video tracks?	
2.1.1 Keyboard	All "Yes" to pass
Are you making sure that all functionality that is available with a keyboard is not requiring specific timing events for individual keystrokes (UNLESS the underlying function requires input that depends on the users movement and not just the endpoints)?	
2.1.2 No Keyboard Trap	All "Yes" to pass
Are you allowing users to navigate through widgets with the use of their tab functionality?	
Are you giving users information on how to exit (via keystrokes) out of an applet so that a user is not trapped inside of the applet once they tab into one?	

2.2.1 Timing Adjustable	One Yes Required.
Are you allowing users to turn off a time limit before encountering it? Or	
Are you allowing your users to adjust the time limit before accounting it (at least 10 times longer than the original default setting? Or	
Are you allowing your users to extend the time limit before it expires? And are you giving the user at least 20 seconds to do so? Or	
Is this a real-time event that cannot have a time limit (such as a live-auction)? Or	
Is the time limit essential and extending it would invalidate the activity? Or	
Is your time limit longer than 20 hours?	
Does your site not have time limits?	
2.2.2 Pause, Stop, Hide	
2.3.1 Three Flashes or Below Threshold	
2.4.1 Bypass Blocks	
2.4.2 Page Titled	One Yes Required.
Do HTML pages have a descriptive title element placed inside the head of the page?	
Are your documents have structural title elements that describe the different sections of the document?	
If you have a web application, does the page titles describe the contents of the page, or are the titles dynamic so that they describe the content of the page?	
2.4.3 Focus Order	
2.4.4 Link Purpose (In Context)	
3.1.1 Language of Page	All "Yes" to pass
Have you defined the HTML documents language in the head section of the page?	
If you have changed the language inside of your page, have you noted the language when the language changed?	
3.2.1 On Focus	
3.2.2 On Input	
3.3.1 Error Identification	
3.3.2 Labels or Instructions	
4.1.1 Parsing	
4.1.2 Name, Role Value	

Accessible University Mock Site Step-by-Step Guide

The Accessible University mock site was developed by the National Center on Accessible Information Technology (AccessIT) as a tool for demonstrating web accessibility principles. Although good and bad examples of accessibility abound in the real world, few sites were developed specifically for this purpose. Most pages in this site demonstrate only one or two accessibility issues each.

It can be found online at <http://www.washington.edu/accessit/AU/>

The chart included below serves as a brief reference document suggesting a method of evaluating the differences between the accessible and inaccessible versions of the pages in question (there are other ways to check as well such as using a screenreader or viewing the source html).

The companion guide is quite comprehensive and provides additional detail.

Page	Feature of Interest	Notes
AU Home Page (1-2)	Text equivalents – banner logo and menu are images that need alt tags	Use browser bar to toggle alt and images
AU Home Page with Image Maps (3-4)	The logo banner now includes menu options – achieved with client-side image maps (better than server-side because they can be navigated with keyboard and have alt tags) but even better yet is to use text rather than pictures of text – style sheets can achieve same kind of look	Use browser bar to zoom in and see how pictures of words can present barriers
AU Home Page with Mouseover Menus (5-6)	The page uses Javascript to bring up dynamic menus as users navigate – the problem can be making actions dependent on mouse clicks – important to ensure device-independent functionality – also thinking about the action, such as automatically entering submenu, and offering other option for navigation besides the dynamic menu	Use tab key to navigate, also use browser bar to view tab order (Structure)
Academic Degree Programs (7-7a)	Skip to Main Content Link – introduces discussion about whether these links should be visible or not – proposes compromise – visible when tabbed	Tab to see link appear and/or use browser bar to list links in new window (Doc Info)

Physics Course Catalog (8-9)	Accessible Tables require html markup – the ABBR and Acronym tags help a screenreader read the word that the abbreviation stands for (included in WCAG not 508)	Use browser bar to view acronym/abbreviation (Structure)
PHYS 101 Login (10-11)	Simple Form should associate login and password fields with labels, not place them in separate table cells which makes it hard to follow when read out loud	Use browser bar to view Fieldset/Labels (Structure)
Physics 101 Home Page (12-13)	Frames need to be given meaningful titles and the NOFRAMES element should be used to provide alternatives not just alert users	Use browser bar to view Frame Name/Title (Structure)
Physics 101 Home Page (13-13a)	Pages that require tools like Adobe Reader and/or RealPlayer need to include a link for users who need to download and install	
Physics Assignment Page (14 syllabus)	Any uploaded elements such as PDF attachments must also be accessible	Note that Adobe is covered in greater detail in additional session within this workshop
Physics Assignment (14 video)	Video should be captioned	Try the video with no sound, then turn on the captions by going to tools, preferences, content, accessibility – discussion of why captions are superior to a transcript alone
AU Events Calendar (15-15a-2)	A complex table requires nested headers and thought as to sizing – solutions to think about include multiple formats – calendar items displayed as a well labeled table or alternatively as a list	Use browser bar to view Complex Data Table (Structure)
AU Registration Form (16-16a)	More complex tables are especially critical with regard to appropriate labels – also, don't use color alone to convey information	View page in grayscale by using browser bar (Colour)
Spanish 101 Dictionary (17-18)	Use of the “lang” attribute can allow screen readers to know which elements are to be spoken in which language – requires html markup	Use browser bar to Show Lang attributes (Doc Info)