

Web Accessibility Basics

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This presentation and handouts may be found at

<http://louisville.edu/web/accessibility/events-workshops/camp-delphi/>

It's The Law

In 1998, Congress amended the Rehabilitation Act to require Federal agencies to make their electronic and information technology accessible to people with disabilities. Inaccessible technology interferes with an individual's ability to obtain and use information quickly and easily. Section 508 was enacted to eliminate barriers in information technology, to make available new opportunities for people with disabilities, and to encourage development of technologies that will help achieve these goals. The law applies to all Federal agencies when they develop, procure, maintain, or use electronic and information technology. Under Section 508 (29 U.S.C. ' 794d), agencies must give disabled employees and members of the public access to information that is comparable to the access available to others. It is recommended that you review the laws and regulations listed below to further your understanding about Section 508 and how you can support implementation.

Americans with Disabilities Act 1996 DOJ Ruling makes clear that ADA applies to web sites

- Several cases relevant to higher ed
 - UC Davis and UC Berkeley Settlement
 - Tyler v. City of Manhattan - One interesting inclusion in their resolution letter submitted to the Office for Civil Rights in the Department of Justice that the university would create a plan to "ensure comparable access for students with disabilities **to official University Web sites**"

Individuals with Disabilities Education Act: Provides for a "*free appropriate public education*" for all children with disabilities from preschool through high school.

- Educational opportunities and outcomes for children with disabilities were greatly strengthened
- No longer merely provides access to education for children with disabilities but establishes high expectations for real educational results for those children

Kentucky passed specific accessibility statutes in 2000 KRS 61.980 – 61.988

- Covered Entity specifically defined to include "State-assisted organization" means a college, university, nonprofit organization, person, political subdivision, school system, or other entity supported in whole or in part by state funds
- **61.982 Access requirements for state information technology equipment and software.**
- The head of each covered entity shall ensure that information technology equipment and software used by the entity's employees, program participants, and the general public:
 - (1) Provide individuals with disabilities, including blind or visually impaired, or deaf or hard of hearing, with access, including but not limited to interactive use of equipment and services, that is equivalent to the access provided individuals who are not disabled, blind or visually impaired, or deaf or hard of hearing;
 - (2) Are designed to present information, including but not limited to prompts used for interactive communication, in formats intended for both visual and nonvisual use; and
 - (3) Have been purchased under a contract that includes the technology access clause required by KRS 61.984.

Examples of Visual Barriers

For those with low vision, blindness or color blindness - Visual Barriers include, but are NOT limited to:

Images especially those used to convey information

Text in a graphic (i.e. a graphic that says "HOME" or "Artistic font text in an image")

Graphic image of detailed information (i.e. maps, organizational charts, diagrams)

Video that has no transcript or captioning w/narrative.

"Downloadable" files that require specific software or plug-ins

Inconsistency in navigation or content placement

Lack of adequate Color Contrast

Headings that are not designated as headings (BOLD CAPS vs <h1>)

Careful selection of fonts, sizes and styles.

Photosensitive Epilepsy

For some, blinking or scrolling text or images are annoying in general, but, they can also cause photosensitive epileptic seizures

Avoid flashing text and images

Novelty of <blink> tag wore off long ago

Annoying at best, dangerous at worst

If you feel you need these "exciting" graphics to make your site compelling, perhaps you need to re-think your content

Examples of Sound Barriers

Background sounds in video or audio

Video or Podcast that has no transcript or captioning w/narrative

“Downloadable” files that require specific software or plug-in to hear

Auditory stimulus of any kind that does not provide an alternative

As you may notice – some of issues overlap into different categories. The good thing about that is that you can kill two birds (or more) with one stone.

Examples Physical Barriers

Excessive mouse-clicks required to accomplish task

Require joystick or mouse for tracking elements

Provide very small amount of “real estate” as the target that should be clicked

Require text input in a short amount of time (i.e. chat rooms)

Unable to navigate with keyboard (tab keys, etc.)

Best practice is to make sure your site can be easily navigated with keyboard

Designing with Accessibility In Mind

Best Practices for providing electronic information online and in Blackboard

- For persons with visual impairments, providing alternate methods of receiving equivalent information in images is essential.
- Golden rule: for any image or graphic displayed on your website, ensure a text alternative is available.
- Videos and Podcasts require descriptive/narrative captions and/or a transcript.
- PowerPoint files need an outline provided in plain text. Provide visual description where necessary.
- Place all text in a single column. Multi-columned text is confusing to screen readers.
- Use simple easy-to-read typefaces. San serif fonts are easiest to read on the screen (ex: Verdana, Tahoma, Arial).
- Provide ample contact information, phone(s) email, etc.
- Provide simple navigation in the left panel with limited choices. Change the standard button labels for clarity
- Use text buttons whenever possible. Use larger text in a simple font with good contrast.
- Use good contrast between background and text color. Avoid animations.
- AVOID USING ALL CAPITAL LETTERS. (the reason should be obvious)
- Use headers properly in all documents/files. Formatting the font style, size, and color, does not provide extra emphasis or info by the screen readers. Headers also increase search ability.
- Provide documents for download as well as presenting content in a Blackboard classroom.
- Delete unused tools and navigation. Less choices means a more easily understood interface. Keep number of choices below 7 if possible.
- Avoid chat or make it optional. Not everyone can use chat. If you decide to use it in your classroom, consider recording the discussion and providing a text file for an alternate assignment.
- Remember that MS Word, Adobe PDF, Powerpoint and other files are NOT inherently accessible. They too must be formatted using headers, providing alternate text for images, etc.
- Remember that if you provide downloadable files, such as MS Office files, Adobe PDF and even graphics – not everyone has the software required to open them. Provide links to free downloadable readers. Also provide alternatives, perhaps a Word document and a PDF file, etc.
- Remember – Blackboard is ON the Internet and is governed by ADA Laws and Guidelines!

W3C/WCAG – 10 Quick Tips

The links in the Quick Tips below mostly go to the [techniques documents](#) that provide implementation guidance - including explanations, strategies, and detailed markup examples.

1. **[Images & animations](#)**: Use the **alt** attribute to describe the function of each visual.
2. **Image maps**. Use the [client-side map](#) and [text for hotspots](#).
3. **Multimedia**. Provide [captioning and transcripts of audio](#), and [descriptions of video](#).
4. **[Hypertext links](#)**. Use text that makes sense when read out of context. For example, avoid "click here."
5. **[Page organization](#)**. Use [headings](#), [lists](#), and consistent structure. Use [CSS](#) for layout and style where possible.
6. **Graphs & charts**. Summarize or use the [longdesc](#) attribute.
7. **Scripts, applets, & plug-ins**. Provide [alternative content](#) in case active features are inaccessible or unsupported.
8. **Frames**. Use the **noframes** element and meaningful [titles](#).
9. **[Tables](#)**. Make line-by-line reading sensible. Summarize.
10. **[Check your work](#)**. [Validate](#). Use tools, checklist, and guidelines at <http://www.w3.org/TR/WCAG>

A complete checklist of WCAG guidelines can be found at:

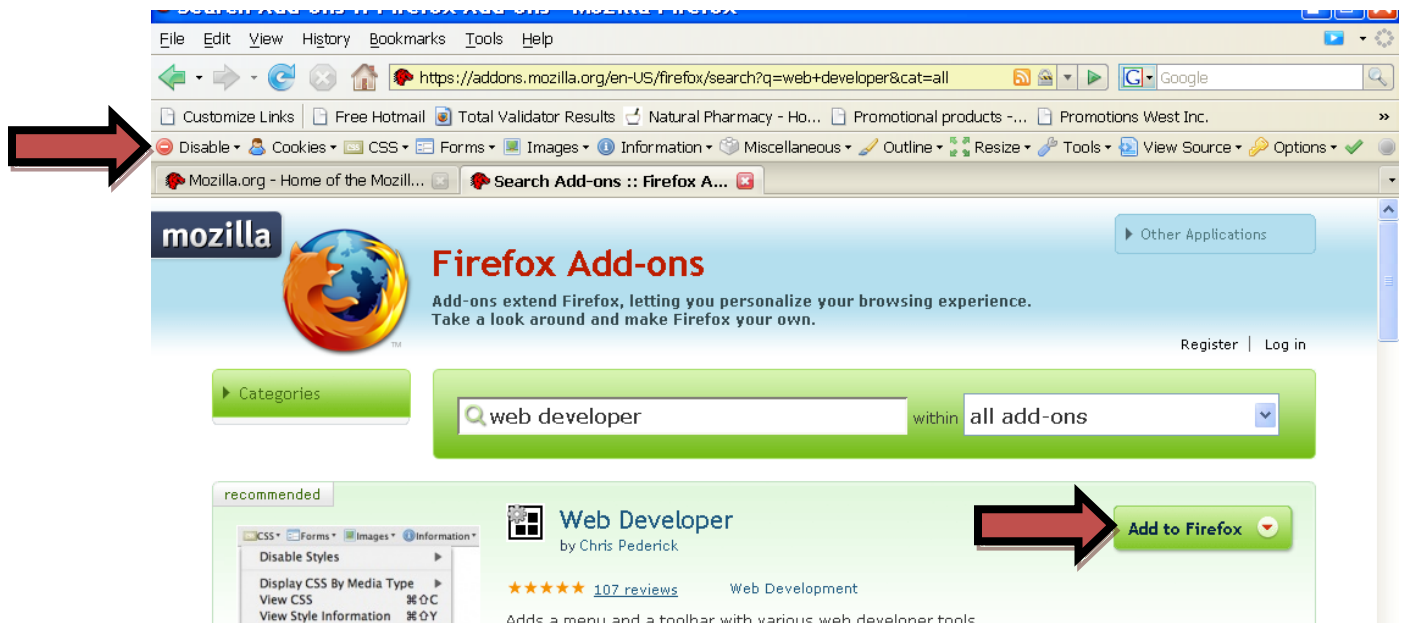
<http://www.w3.org/TR/WCAG10/full-checklist.html>

Basic 5-minute Quick Check

- Run the WAVE test – go to <http://wave.webaim.org> and enter your url to test it.
- Disable or turn off images in your browser and check for alt text
- Disable or turn off JavaScript support, does site still function properly?
- Tab through the page to navigate, try navigating without a mouse, you should be able to access all areas of the site.
- Increase the font size by typing Ctrl+ and/or Ctrl- -- or using the browser settings.
- Disable/turn off support for CSS, does the page still make sense?
- If you have tables on your page, linearize the page to see how they will be translated by the screen reader. (Under “Miscellaneous” in Web Dev Toolbar)
- Look at site in different browsers and check for consistency.

Note: For most of these steps, I use the “Web Developer” extension in the Firefox Browser. If you do not have Firefox, it is a free download at <http://www.mozilla.org/>

Download the browser program and install it. Then, open the browser and browse to <https://addons.mozilla.org/en-US/firefox/search?q=web+developer&cat=all> to Download the Web Developer tools. Click “Add to Firefox”. After you close and reopen Firefox, you’ll have a new toolbar that looks like the one below:



Providing Clear Concise Links

In other words - DO NOT [CLICK HERE!](#)

Using “[click here](#)” or “[read more](#)” or “[details](#)” can not only confuse users but also frustrate them into giving up on finding the information they need from your site.

Consider this:

How many times have you clicked a link to find out it was not what you expected, downloaded a file, or forced you to download a plugin?

How did that make you feel?

Many users with assistive technology or cognitive issues struggle with this even more.

The rule of thumb is to describe where it goes and what it opens (if other than a web page). Screen readers read links to blind users exactly as they are linked.

For instance, the screen reader would say, “Link: Click here” when it reads the link below, [Click here](#) to see our schedule of events.

A better option for this link would be: [Schedule of Events](#). in this case, the screen reader would say, “Link: Schedule of Events”

To insure that you are providing clear concise links, consider what the screen reader user will hear when they arrive at your link. Does it indicate where it will take the user and what it will open?

Most links imply that you are opening another web page or “html document” that is part of your website. If you’re sending users to another site, you may want to indicate as much:

For more information on pandas, please visit the [National Panda Website](#).

OR, you could provide the full link

For more information on pandas, please visit <http://nationalpandawebsite.org>

either of these links indicate where they are taking the user and what they’re opening.

However a bad link to this same situation would be:

More [details](#).

If you’re linking to downloadable files – this is a different animal, please see below.

Use Care when linking to downloadable files (Word, PDF, Excel, etc.)

A very important question to ask yourself when you are linking to a downloadable file. "Is it absolutely necessary that this file remain a PDF, Word, Powerpoint or Excel file?"

If the answer is NO - why not turn the information into a web page that is more easily accessed by EVERYONE? Many people have found it easier to build an accessible web page from these kinds of files - than actually retrofitting the file to make it accessible.

Yes, forms, annual reports and some other documents often need to stay in the exact format, font, style in which they are created. However, have you considered that not everyone has Microsoft Office on their home computer? If you can convert the file to a web page without compromising its integrity - that's your best bet. If a form or other document must be presented exactly in its original form - perhaps converting it to a PDF would make it more accessible for those without Microsoft products. If it is simply text, or even text with some graphics, perhaps it would be best to convert that information into a web page.

Consider all your options and remember that the easiest way is not always the best. Especially if you have to retrofit or redo down the road. For those files that must remain in their original format, font, layout, style, etc. - please remember, there are three things to do when linking to a downloadable file:

1. Provide an alert that the link will open or download a file separate from your website.
2. Provide accessible files - format it the same as a webpage with headers, styles, alt text, etc. Check PDF files! (see below)
3. Provide a link to the reader or player for that type of file, if one necessary. Remember, not everyone owns Microsoft Office - they may not be able to open a Word, Excel or other Office file.

1. Providing an alert: You should indicate that the file is in PDF format (or Word, etc) with either text or graphic and that indicator or alert should be included in the link. (see below)

EXAMPLES OF GOOD LINKS:

Please complete the [Admissions Form \(PDF\)](#) to apply.

Please complete the [Admissions Form \(Excel\)](#) to apply.

Please complete the [Admissions Form \(Word\)](#) to apply.

(a graphic can also be used, if preferred, in place of the text in parenthesis above)

Please complete the [Admissions Form](#)  to apply.

EXAMPLES OF INADEQUATE LINKS

Please complete the [Admissions Form](#) to apply.

Please complete the [Admissions Form PDF](#) to apply.

Please complete the [Admissions Form](#) (Word) to apply.

2. Provide accessible downloadable files: There is no easy way to check an Office file - but it is a best-practice to format it as you would a web page. Provide alt-text for images, use headers, styles, etc.

For instructions on how to make your PDF file accessible, please view the Adobe tutorial at http://www.adobe.com/enterprise/accessibility/popup_create_pdfs.html. You will learn to test your document and make it accessible. Adobe Professional 7.0+ offers a checker tool for PDF files. (Advanced | Accessibility | Full Check | OK). Please check your file for accessibility!

3. Provide a link to the reader: Remember, not everyone has access to the Office product. It is best to offer a PDF file if the document will reach a broad range of users. The link for the Adobe Acrobat Reader should be on ANY page where you have a PDF file linked.

For example, the link may be as follows:

PDF files on this page require the free [Adobe Acrobat Reader \(download\)](#).

BONUS INFORMATION!

Protect yourself from Spammers

Spammers are very clever and love to load your email box full! To prevent them from getting your email address – avoid putting it on your Web pages. The university has an email portal that allows us to provide email links on our pages, but to protect our email address.

To direct email through the email gateway, you'll provide a link on your site such as:

[Email Marilyn Greenwell](#) or [Email Department Name](#)

instead of [userid@louisville.edu](#) OR [deptname@louisville.edu](#)

– these links would go to the email gateway - For instance <http://louisville.edu/cgi-bin/uofl.mail?mlgree13> or <http://louisville.edu/cgi-bin/uofl.mail?deptname>

You'll find more on this at: <http://louisville.edu/web/docs/howto/email-gateway.html/>