The ASERL Code of Conduct

• No harassment, in-person or online
• Includes unwelcome or offensive verbal comments, nonverbal expressions, or behaviors
• Report issues to ASERL staff or Board -- when it occurs, or afterward
• Reports are confidential
• Violators may be warned, sanctioned, or expelled
• ASERL may also notify the accused person’s employer of the reported incident
• http://www.aserl.org/asrl_code_of_conduct/
Website Accessibility & Library Resources

November 10, 2020

Sara Belmont
Web Developer
William & Mary Libraries
sjbelmont@wm.edu
Overview

Ask questions in the chat box!

1. Why is accessibility important?
2. What makes a website accessible?
3. How to tell if a website is accessible?
What barriers exist online?

1. Graphics and text that can’t be seen or read
2. Audio or video that can’t be heard or seen
3. Clickable buttons that are too small to click, go to unexpected places, or can’t be reached with a keyboard
4. Confusing and complex language or instructions
5. Complex or cluttered layout designs
6. Flickering images and overuse of bright colors
7. Slow internet connections

Image from Lambton Shield website, https://lambtonshield.com/government-promoting-grants-improve-accessibility/
Why is accessibility important?
Accessibility Law

- **Rehabilitation Act of 1973**
  - Any program or activity conducted or procured by a federal agency or receiving federal money must follow accessibility requirements

- **Section 508**
  - Added to the Rehabilitation Act in 1986
  - Extended the Rehabilitation Act to apply to any electronic program or activity

Sources:
- U.S. Department of Labor website: Section 504
- Section 508 website
- ADA website
Accessibility Law

- **Americans with Disabilities Act (ADA) - 1990**
  - Prohibits discrimination against individuals with disabilities in all areas of public life.

- **ADA Title II** (public services)
  - Applies to services and programs provided by local and state governments

- **ADA Title III** (public accommodations)
  - Applies to services and programs provided by 12 different types of businesses that the government defines as public accommodations, including schools and libraries
Why is accessibility important?

Who does this affect?

- Disability affects between 20-25% of Americans*
- 10% of all Americans have difficulty with hearing or vision
- 11% live with cognitive impairments that affect concentration, remembering and decision-making
- Over half of adults over 65 have some type of disability

* Percents vary based on the study. The [CDC currently reports 25%](https://www.cdc.gov/disability/data/infographic/disability-overview.html) of Americans live with some type of disability; the [2010 Census documents the number](https://www.census.gov/acs/www/about-the-acs/faq/) at 19%; the [2016 American Community Survey reports](https://www.census.gov/acs/www/about-the-acs/faq/) a lower number at 12%.
“The power of the Web is in its universality. Access by everyone regardless of disability is an essential aspect.”

—Tim Berners-Lee
EBSCO
Form controls that don’t work

SpringerLink
Poor color contrast of blue links

JSTOR
Form controls that don’t work

Factiva
Inaccessible menu navigation links
What makes a website accessible?
### WCAG “wee-kag”

https://www.w3.org/WAI/standards-guidelines/wcag/

**Web Content Accessibility Guidelines**

- Created and maintained by the W3C (Worldwide Web Consortium) Website Accessibility Initiative
- The standard referred to in Section 508 and used in VPATs
- 13 guidelines divided into 4 categories:
  - Perceivable
  - Operable
  - Understandable
  - Robust
- Three levels of success criteria: A, AA, AAA
- Most recent version is 2.1, which added guidelines for mobile applications
WCAG Principles - POUR

1. Text alternatives
2. Time-based media
3. Adaptable
4. Distinguishable
5. Keyboard accessible
6. Enough time
7. Seizures and physical reactions
8. Navigable
9. Input modalities
10. Readable
11. Predictable
12. Input assistance
13. Compatible

Illustration of the POUR principle from MightyBytes.com
WCAG Principles

Perceivable

- Alt Text: provide alternate text versions for content that relies on a single sense:
  - Images - write alternative text to describe the purpose of the image
  - Video - provide captions that can be read for the audio, as well as audio descriptions to describe what’s going on in the video

- Document Structure: add structure to your documents with headings and bullets to make your text accessible to assistive technologies

- Color: be mindful of selecting colors for text, or using text on a colored background
Document Structure - Example

Wall of text

A wall of text is an excessively long post to a noticeboard or talk page discussion, which can often be so long that some don't read it. Some walls of text are intentionally disruptive, such as when an editor attempting to overwhelm a discussion with a mass of irrelevant kilobytes. Other walls are due to lack of awareness of good practices, such as when an editor tries to cram every one of their cogent points into a single comprehensive response that is roughly the length of a short novel. Not all long posts are walls of text; some can be nuanced and thoughtful. Just remember: the longer it is, the less of it people will read.

The chunk-o-text defense (COTD) is an alleged wikilawyer strategy whereby an editor accused of wrongdoing defends their actions with a giant chunk of text that contains so many diffs, assertions, examples, and allegations as to be virtually unanswerable. However, an equal-but-opposite questionable strategy is dismissal of legitimate evidence and valid rationales with a claim of "text-walling" or "TLDR". Not every matter can be addressed with a one-liner, and validity does not correspond to length, especially the more complex the matter is. The COTD is characterized by noise and hand-waving, not simply verbosity.

The massive wall of text (MWOT) often appears in disputes and bombards you with so much information and underhanded hostility that it’s almost impossible to keep up without replying with one of your own. MWOTs are a good indication that people are talking past each other. Common features include: new arguments unrelated to the matter at hand, already-discussed arguments, giant paragraphs that never really come to a point, thinly-veiled personal attacks, sarcasm, the rush you feel through your veins as you type it.

Wall of text

A wall of text is an excessively long post to a noticeboard or talk page discussion, which can often be so long that some don’t read it.

Types

Some walls of text are intentionally disruptive, such as when an editor attempts to overwhelm a discussion with a mass of irrelevant kilobytes. Other walls are due to lack of awareness of good practices, such as when an editor tries to cram every one of their cogent points into a single comprehensive response that is roughly the length of a short novel. Not all long posts are walls of text; some can be nuanced and thoughtful. Just remember: the longer it is, the less of it people will read.

Variations

Chunk-o-text defense

The chunk-o-text defense (COTD) is an alleged wikilawyer strategy whereby an editor accused of wrongdoing defends their actions with a giant chunk of text that contains so many diffs, assertions, examples, and allegations as to be virtually unanswerable. However, an equal-but-opposite questionable strategy is dismissal of legitimate evidence and valid rationales with a claim of "text-walling" or "TLDR". Not every matter can be addressed with a one-liner, and validity does not correspond to length, especially the more complex the matter is. The COTD is characterized by noise and hand-waving, not simply verbosity.

Massive wall of text

The massive wall of text (MWOT) often appears in disputes and bombards you with so much information and underhanded hostility that it’s almost impossible to keep up without replying with one of your own. MWOTs are a good indication that people are talking past each other. Common features include:

- New arguments unrelated to the matter at hand
- Already-discussed arguments
- Giant paragraphs that never really come to a point
- Thinly-veiled personal attacks
Color Contrast - Google Color Picker

80 colors available:

30 usable on a white background:
Color Contrast - Microsoft Office Color Picker

70 colors available:

26 usable on a white background:
Perceivable - Tools

- **WebAim Contrast Checker**
  webaim.org/resources/contrastchecker
  Enter the color of your text and the color of your background, and this tool will tell you if it passes the contrast requirement.

- **Tanaguru Contrast Finder**
  contrast-finder.tanaguru.com
  Similar to WebAim, but provides good alternative color suggestions that will meet requirements.

- **RGBlind**
  www.rgbblind.se/url
  Color blindness simulator
WCAG Principles

Operable

- **Keyboard Navigation**: Menu buttons and links should support logical navigation using only the TAB key on your keyboard.

- **Descriptive Links**: Links and buttons should use text that describes the intent of the link - avoid “Click here” or “Learn more”.

- **Navigation Focus**: Use cues to show when something is clicked or active.

- Avoid blinking or flashing content and timed interactions, or provide means for your users to control the timing.
Link Text - Examples

Don’t:

Download our annual report
Visit https://www.nngroup.com/articles/writing-links/
Make sure your emphasized text doesn’t look like a link

Do:

Download our annual report (pdf)
Visit the Nielsen Norman website on writing hyperlinks
Make sure your emphasized text doesn’t look like a link
WCAG Principles

Understandable

- **Write simply** - aim for a middle-school reading level, or a Flesch–Kincaid score over 60
- Define and spell out abbreviations and jargon
- Open links in the same window, or provide a notification to let the user know what they’re using is about to change
- Be consistent - use the same menu structure, text styles, etc.
- Provide clear labels where user input is required, as well as clear error messages and descriptions
Understandable - Example

Before:

We must receive your completed application form on or before the 15th day of the second month following the month you are reporting. If you submit your application electronically, we must receive it on or before the 25th day of the second month following the month you are reporting.

After:

<table>
<thead>
<tr>
<th>If you submit your form:</th>
<th>We must receive it by:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electronically</td>
<td>25th of the second month</td>
</tr>
<tr>
<td>Not electronically</td>
<td>15th of the second month</td>
</tr>
</tbody>
</table>

“Plain Language Before and After: Monthly Due Date”,
https://www.plainlanguage.gov/examples/before-and-after/monthly-due-date/,
©plainlanguage.gov
Understandable - Tools

- **Hemingway Text Editor**
  www.hemingwayapp.com
  This editor will show the reading difficulty level of your document. You can edit your document in the editor, and it will provide live updates to show areas for improvement.

- **Juicy Studio Readability Test**
  juicystudio.com/services/readability.php
  Enter a URL and the test will score your page using several popular reading level scales.

- **plainlanguage.gov**
  Guides and examples, including before and afters showing how to improve text.
WCAG Principles

Robust

- Your content should be available to the widest variety of devices like smartphones, tablets, and assistive technologies

Most of the guidelines here govern how to write good HTML - using default HTML elements as much as possible, avoiding duplicate attributes and IDs, using HTML tags in the correct order according to spec, etc.
# WCAG Principles in Plain Language

<table>
<thead>
<tr>
<th>Perceivable</th>
<th>Operable</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Text alternatives</td>
<td>1. Write good alt text</td>
</tr>
<tr>
<td>2. Time-based media</td>
<td>2. Provide captions, audio descriptions</td>
</tr>
<tr>
<td>3. Adaptable</td>
<td>3. Use headings and bullets for structure</td>
</tr>
<tr>
<td>4. Distinguishable</td>
<td>4. Use good color contrast</td>
</tr>
<tr>
<td>5. Keyboard accessible</td>
<td>5. Test your website using only the TAB key</td>
</tr>
<tr>
<td>6. Enough time</td>
<td>6. Provide enough time to read</td>
</tr>
<tr>
<td>7. Seizures, physical reactions</td>
<td>7. Avoid flickering or blinking images</td>
</tr>
<tr>
<td>8. Navigable</td>
<td>8. Show where a user is on the page</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Understandable</th>
<th>Robust</th>
</tr>
</thead>
<tbody>
<tr>
<td>10. Readable</td>
<td>13. Compatible</td>
</tr>
<tr>
<td>11. Predictable</td>
<td>12. Help users avoid and correct mistakes</td>
</tr>
<tr>
<td>12. Input assistance</td>
<td>13. Usable on multiple types of devices</td>
</tr>
</tbody>
</table>

**Perceivable** - Text alternatives, Time-based media, Adaptable, Distinguishable

**Operable** - Keyboard accessible, Enough time, Seizures, physical reactions, Navigable, Input modalities

**Understandable** - Readable, Predictable

**Robust** - Compatible
How does accessibility affect library resources?

Library Accessibility Alliance

a-erl

https://www.btaa.org/library/accessibility/reports

- University of Illinois
- Indiana University
- Michigan State University
- Northwestern University
- Ohio State University
- Pennsylvania State University
- Purdue University
- Rutgers University
- University of Iowa
- University of Maryland
- University of Michigan
- University of Minnesota
- University of Nebraska-Lincoln
- University of Wisconsin-Madison
- Auburn University
- Clemson University
- Duke University
- East Carolina University
- Emory University
- Florida International University
- Florida State University
- George Mason University
- Georgia Institute of Technology
- Georgia State University
- Johns Hopkins University
- Louisiana State University
- Mississippi State University
- North Carolina State University
- Library of Virginia
- Tulane University
- University of Alabama
- University of Alabama-Birmingham
- University of Central Florida
- University of Florida
- University of Georgia
- University of Kentucky
- University of Louisville
- University of Memphis
- University of Miami
- University of Mississippi
- University of North Carolina at Chapel Hill
- University of North Carolina at Charlotte
- University of North Carolina at Greensboro
- University of South Carolina
- University of South Florida
- University of Tennessee-Knoxville
- University of Virginia
- Vanderbilt University
- Virginia Commonwealth University
- Virginia Tech
- Wake Forest University
- William & Mary
Most problematic content in our databases:

1. Navigation and document structure - headings used out of order, buttons and form elements that can’t be reached with a keyboard
2. Color and font choices
3. Video, audio, images without captions or alt text
4. Forms missing labels
5. PDFs

Most of the vendors the LAA tested failed 20%-25% of the guidelines, and a handful failed up to half
Next Steps:
Is it accessible?

- Look for VPATs, but don’t overly rely on them
  - VPAT repository: [www.carli.illinois.edu/products-services/eres/vpat-repository](http://www.carli.illinois.edu/products-services/eres/vpat-repository)

- Do your own quick tests
  - [wave.webaim.org](http://wave.webaim.org)
  - Use the accessibility checker in Word, Google Docs, Adobe Acrobat
  - Install NVDA, a free Windows screen-reader: [webaim.org/articles/nvda/#getting](http://webaim.org/articles/nvda/#getting)

- Use alt text everywhere, write good links, and use headings!
Thank You!

Sara Belmont
Web Developer
William & Mary Libraries
sjbelmont@wm.edu
Recommended Reading and Sources

Reading

Library Accessibility Alliance Tests
https://www.btaa.org/library/accessibility/library-e-resource-accessibility-testing

Library Accessibility Alliance Standardized License Language

Michigan State University Purchasing Process
https://webaccess.msu.edu/Policy_and_Guidelines/purchasing/index.html

Beyond ADA Compliance: The Library as a Place for All
https://academicworks.cuny.edu/ulj/vol23/iss1/3

Accessibility for Everyone
https://abookapart.com/products/accessibility-for-everyone

The A11y Project
https://a11yproject.com/

W3C Introduction to Accessibility
https://www.w3.org/WAI/fundamentals/accessibility-intro/

DIY Testing Tools

Totally Accessibility Visualization Toolkit
https://khan.github.io/tota11y/

WebAIM WAVE Accessibility Evaluation Tool
https://wave.webaim.org/

Silktide Disability Simulator
https://silktide.com/resources/toolbar/

NVDA Screen Reader (Windows Only)
webaim.org/articles/nvda/#getting

WebAIM Contrast Checker
https://webaim.org/resources/contrastchecker/