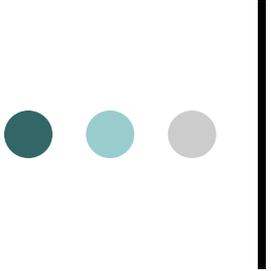




# Information Access for All

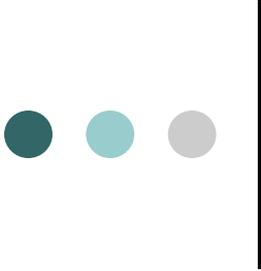
Section 508 and beyond for libraries





# As it stands right now...

- At least 10% of the human population has a disability.
- That percentage will increase as we are living longer.
- Therefore someone visiting your website may not be able to read, use, or understand the information you present.
  - Blind, visual/print disabilities
  - Deaf
  - Mobility disabilities
  - Cognitive disabilities



# Web accessibility is not a new idea (just an afterthought)

- Issues of inaccessibility are as old as the web itself.
- The Web Accessibility Initiative (WAI) of the WWW Consortium began in 1997. WAI was funded in part by NIDRR from 2000 to 2005.
- WAI created 3 levels of conformance for web content, authoring tools, and user agents. ([www.w3.org/WAI](http://www.w3.org/WAI)).



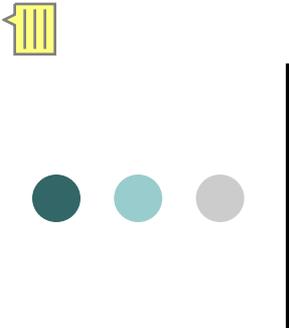
# Section 508 of the Rehabilitation Act of 1973 (as amended) addresses information and technology access

- Section 508 was enacted in 1998 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. – [Section508.gov](http://Section508.gov)
- Technical standards cover software applications, operating systems, **web-based information and applications**, telecommunications products, **video and multimedia**, self-contained information products, and desktop and portable computers.



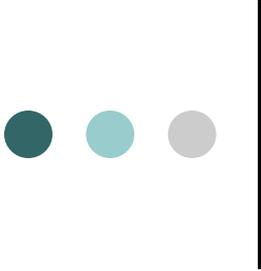
# The Rehabilitation Act briefly

- Enacted in 1973 and amended several times
- Established agencies, institutes, and committees including RSA, ICDR, **NIDRR**, NCD, and the Access Board
- Established vocational rehabilitation, independent living, parent training, and protection and advocacy programs
- Defines the civil rights of people with disabilities
- Established professional education and training, special projects, and demonstration projects.
- Establishes the basis for research funding in disability and rehabilitation.



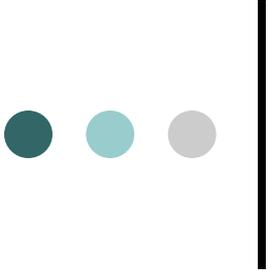
# 508 Guidelines are an outgrowth of WAI (sort of)

- The Access Board created an Electronic and Information Technology Access Advisory Committee (EITAAC) to advise it on the standards.
- The Committee's final report was delivered to the Board on May 11, 1999.
- On March 31, 2000, the Board published a Notice of Proposed Rulemaking based on the Committee's recommendations. Proposed standards were open for comment until the end of May 2000.
- The final standards were published in the Federal Register in December 2000. Enactment and enforcement by July 31, 2001.
- The Telecommunications and Electronic and Information Technology Advisory Committee has submitted modifications. See [http://webaim.org/teitac/wiki/teitac\\_wiki](http://webaim.org/teitac/wiki/teitac_wiki)



# 508 isn't the only law

- Section 504 of the Rehab Act (1973)
  - Bars discrimination by the US Govt
- ADA (1990)
  - Responsibilities of private entities and state and local govts
- Sec 255 of the Telecommunications Act of 1996
  - Accessibility and usability of telecom
- Other countries have similar legislation. States, counties, and municipalities may have their own accessibility laws.



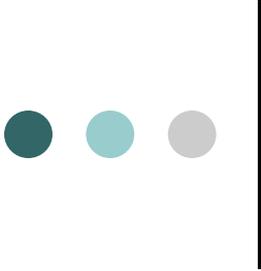
# Our focus: Web sites, e-docs, and multimedia

- As libraries, these are our focus when it comes to accessibility.
- Websites need to be viewable, readable, and “interactable” by our patrons.
- We need to build up our digital archives while ensuring their accessibility.
- As we create presentations, videos, and other multimedia, we need to consider access for all.



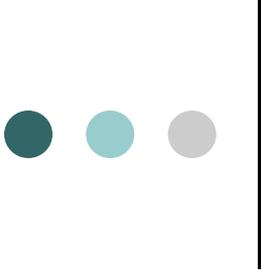
# 508's 16 rules for accessible websites...

- (a) A text equivalent for every non-text element shall be provided (e.g., via "alt", "longdesc", or in element content).
- (b) Equivalent alternatives for any multimedia presentation shall be synchronized with the presentation.
- (c) Web pages shall be designed so that all information conveyed with color is also available without color, for example from context or markup.
- (d) Documents shall be organized so they are readable without requiring an associated style sheet.



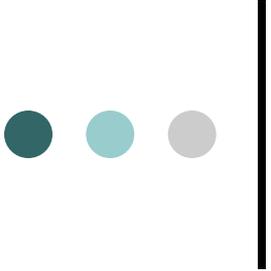
# 16 rules...

- (e) Redundant text links shall be provided for each active region of a server-side image map.
- (f) Client-side image maps shall be provided instead of server-side image maps except where the regions cannot be defined with an available geometric shape.
- (g) Row and column headers shall be identified for data tables.
- (h) Markup shall be used to associate data cells and header cells for data tables that have two or more logical levels of row or column headers.



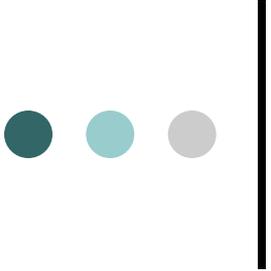
# 16 rules...

- (i) Frames shall be titled with text that facilitates frame identification and navigation.
- (j) Pages shall be designed to avoid causing the screen to flicker with a frequency greater than 2 Hz and lower than 55 Hz.
- (k) A **text-only page**, with equivalent information or functionality, shall be provided to make a web site comply with the provisions of this part, **when compliance cannot be accomplished in any other way**. The content of the text-only page shall be updated whenever the primary page changes.
- (l) When pages utilize scripting languages to display content, or to create interface elements, the information provided by the script shall be identified with functional text that can be read by assistive technology.



# 16 rules...

- (m) When a web page requires that an applet, plug-in or other application be present on the client system to interpret page content, the page must provide a link to a plug-in or applet that complies with §1194.21(a) through (l).
- (n) When electronic forms are designed to be completed online, the form shall allow people using assistive technology to access the information, field elements, and functionality required for completion and submission of the form, including all directions and cues.
- (o) A method shall be provided that permits users to skip repetitive navigation links.
- (p) When a timed response is required, the user shall be alerted and given sufficient time to indicate more time is required.



# Go further

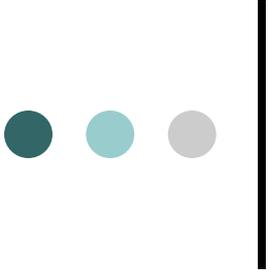
- Beyond 508
  - Use consistent and appropriate markup (H1 for top level headings, blockquote for quotes, address, cite).
  - Let the browser choose the look (strong, em, smaller).
  - Consider usability (what do your visitors expect: left side nav, search, about/contact).
  - Consider Dept consistency.



# Accessible Multimedia

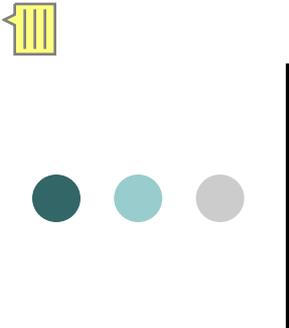
(back to 508)

- (c) All training and informational video and multimedia productions which support the agency's mission, regardless of format, that contain speech or other audio information *necessary for the comprehension of the content*, shall be open or closed captioned.
- (d) All training and informational video and multimedia productions which support the agency's mission, regardless of format, that contain visual information *necessary for the comprehension of the content*, shall be audio described.
- (e) Display or presentation of alternate text presentation or audio descriptions shall be user-selectable unless permanent.
- See also Web rule B (synchronizing alternatives with multimedia presentations).
- (a) and (b) relate to DTV ready TVs and secondary audio playback in TVs and tv-tuned computers.



## In addition...

- Any software or hardware you create or purchase for staff or for your patrons must comply with 508 standards (section 1194.21, .24, .25, and .26).
- Any telecommunications equipment you create or purchase must comply (1194.23).



# E-docs (PDF, Word, Excel, PP, etc.)

- Many of the web accessibility rules apply here:
  - Alt text for images
  - Tables laid out with headers
  - Forms labeled and tabbed appropriately
  - Use markup (H1, H2) rather than changing points and appearance
- Many are specific to documents:
  - Logical reading order
  - URLs should be live and accurate
  - TOCs and bookmarks should be active and accurate
- These are reinterpretations of web accessibility guidelines. These were developed by HHS as agency-wide accessibility guidelines. (See <http://www.hhs.gov/web/508/index.html> for web, PDF, Word, xls, etc)



# Easiest to create accessible documents directly from authoring tools

- Use consistent markup
  - Headers, columns, bold, italic
  - Use section and page breaks appropriately
- Add alternative text to images
- Use captions for figures and tables
- Mark up tables with headers
- These tags will be picked up in the PDF.



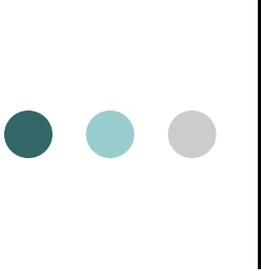
# Retrofitting older documents

- Existing paper documents can be scanned and made as accessible as possible.
  - Adobe 9 and other PDF generators can OCR text, recognize columns and tables, and find figures
  - A9 will generate an accessibility report using 508 requirements or WCAG guidelines
  - Human intervention is needed to tag and format, and to add alt text
- Keep the original TIFFs!



# Testing your Accessibility

- Several tools are available to test/evaluate your site's accessibility
  - WAI has a searchable database of evaluation tools at <http://www.w3.org/WAI/ER/tools/simple>
  - They also teach you how to choose the right one
  - Adobe 9 incorporates an accessibility reporting tool that is customizable to your level of accessibility.

A decorative graphic on the left side of the slide, featuring three colored circles (dark teal, light teal, and grey) and a vertical line to their right.

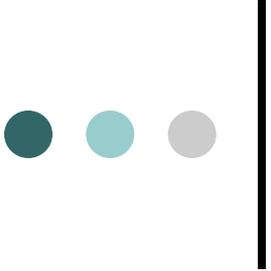
# Don't rely on automated tools

- Authoring programs assist in many ways (alt text, labels, CSS) but encourage bad habits
- Reporting tools catch many common errors, but they are no substitute for human interaction
- Involve users in the accessibility/usability testing  
<http://www.w3.org/WAI/eval/users.html>



# ● ● ● | Make it part of your plan

- Consider accessibility and usability from the beginning of your design/planning process.
- Decide on your level of conformance (508? A? AA? AAA?)
- Test, check, and repair as needed
- Get someone to check it!



# Undue Burden?

- Make every effort possible, but sometimes it's not possible:
- When development, procurement, maintenance, or use of electronic and information technology that meets the standards published by the Access Board under paragraph (2) would impose an undue burden, the Federal department or agency shall provide individuals with disabilities covered by paragraph (1) with the information and data involved by an alternative means of access that allows the individual to use the information and data.



# For more information visit...

- Section 508 [www.section508.gov](http://www.section508.gov)
- WAI @ W3C [www.w3.org/WAI](http://www.w3.org/WAI)
- Adobe9 accessibility guides  
[www.adobe.com/accessibility/products/acrobat/training.html](http://www.adobe.com/accessibility/products/acrobat/training.html)
- Web Accessibility In Mind [www.webaim.org](http://www.webaim.org)
- TEITAC Wiki [webaim.org/teitac/wiki/teitac\\_wiki](http://webaim.org/teitac/wiki/teitac_wiki)
- Cynthia Says [www.cynthiasays.com](http://www.cynthiasays.com)
- **Department of Transportation Sec 508 Coordinator**  
Jonni Burnham - 202-366-5426 -  
[jonni.burnham@ost.dot.gov](mailto:jonni.burnham@ost.dot.gov)