2. Review of Section 508 Standards for Web Accessibility

This summary is focused on the sixteen standards for Web accessibility written by the Access Board for Section 508 of the Workforce Reinvestment Act of 1998.

Beginning in June of 2001, all government Web sites must conform to these standards. Any contractor doing Web development for the Federal government must conform to these standards. Any company doing business with the Federal government or with states receiving technical assistance funds (Tech Act states) would do best to put forth an accessible Web presence.

For these and the numerous other reasons stated in Section 1, you'll want to follow these standards for your business.

The full set of Section 508 final standards is available on the Access Board Web site at http://www.access-board.gov/sec508/508standards.htm. The specific standards for the Web are in §1194.22 of that document entitled "Web-based Intranet and Internet Information and Applications."
Section 508 Standards

Here is the summary of the standards:

12.1 Offer Text Equivalents

§1194.22 (a)
A text equivalent for every non-text element shall be provided (e.g., via "alt", "longdesc", or in element content).

Every image on your Web site must have alternative text including alt="" for images that do not carry important information or are redundant. Audio content must have captions and/or transcripts. Use the longdesc attribute and/or the D-link to describe graphics like charts or graphs where the alt text does not carry equivalent information.

12.2 Present Synchronized Multimedia

§1194.22 (b)
Equivalent alternatives for any multimedia presentation shall be synchronized with the presentation.

Text equivalents for multimedia content must be synchronized with the presentation, i.e., captions must be included. Web authors are encouraged to include transcripts of audio content as well as synchronized alternatives because those transcripts permit searching and extracting.

12.3 Remain Independent of Color

§1194.22 (c)
Web pages shall be designed so that all information conveyed with color is also available without color, for example from context or markup.

Do not convey important information with color alone. Use font, special characters, or other context in addition to using color.

12.4 Stay Independent of Style Sheets

§1194.22 (d)
Documents shall be organized so they are readable without requiring an associated style sheet.

Style sheets are effective in adding font variations and colors to your Web pages. But dont substitute style changes for the structural elements of HTML like headings, paragraphs, and lists.
If you use CSS for positioning or page-wide color controls, check out your pages with style sheets disabled to be sure that information is not lost.

### 12.5 Provide Redundant Links for Server-Side Maps

§1194.22 (e)
Redundant text links shall be provided for each active region of a server-side image map.

If you must use a server-side map, make sure there are equivalent text links for every active region on the map.

### 12.6 Use Client-Side Image Maps

§1194.22? (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.

Because a polygon can be used to describe any area to as much detail as desired, it makes sense to use only client-side image maps in all cases. Be sure to include the alternative text for each area of the map.

### 12.7 Label Row and Column Headers

§1194.22 (g)
Row and column headers shall be identified for data tables.

If, in your data table, you have table headers at the tops of columns and/or the ends of rows, use the header (TH) markup to indicate them.

### 12.8 Use the Headers Attribute in Complex Tables

§1194.22 (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.

It is probably not a good idea to use tables that have more than one logical level of row or column headers. If you do, include markup on each cell with the headers attribute to indicate the meaning of the cell and the id attribute to identify the header information.
§1194.22 (i)
Frames shall be titled with text that facilitates frame identification and navigation.

In order to facilitate reasonable navigation of a frame site each frame element in the frameset needs a meaningful title and name attribute. Each frame page needs to have a TITLE element.

12.10 Reduce Flicker

§1194.22 (j)
Pages shall be designed to avoid causing the screen to flicker with a frequency greater than 2 Hz and lower than 55 Hz.

Don't have animated gifs or other features that cause a portion of the screen to flicker. This condition can cause seizures in people with photosensitive epilepsy.

12.11 Offer a Text-only Alternative (LAST RESORT)

§1194.22 (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.

If you cannot meet some aspect of the 508 Standards, as a last resort, you can create a text-only site. The text-only site must have all the information of the main site, must be updated with the same frequency as the main site, and must be immediately and obviously accessible from the main page.

12.12 Write Accessible Scripts

§1194.22 (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.

One way to check your site for Section 508 compliance on this standard is to be sure essential information is not lost when JavaScript functions are turned off. If you use mouse-over highlighting or if there are alternatives for the links in your mouse-over menus, essential information will not be lost.

If you use scripting to write essential information in visible form when your document is loading, then
that information will be available to assistive technology.

If you are using hidden content exposed with JavaScript event handlers, make sure that either equivalents are available without JavaScript or that you can trigger the event handlers with the keyboard.

### 12.13 Specify Accessible Applets and Plug-ins

§1194.22 (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)(1-11).

Applets and plug-ins must satisfy the Section 508 software standards. In particular, they must be completely usable without a mouse. As focus moves from object to object, assistive technology must be able to determine the role and default action of each focused object. Test your use of applets or plug-ins using only the keyboard.

### 12.14 Design Accessible Forms

§1194.22 (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.

Make certain you label form elements carefully, placing the text labels close to the controls. Use the LABEL element to programmatically associate prompts with input elements when the text prompt and the control are separated.

### 12.15 Offer Skip Navigation

§1194.22 (o)
A method shall be provided that permits users to skip repetitive navigation links.

Provide a method for users to skip over navigation links. This can be done with a "skip navigation" link at the top of your page. Or, use well-programmed frames instead.

### 12.16 Alert Users to Timed Responses

§1194.22 (p)
When a timed response is required, the user shall be alerted and given sufficient time to
Section 508 Standards indicate more time is required.

If you expect a response from a user in a certain prescribed time, alert the user to that fact and allow for additional time.

If you have comments or questions on the content of this course, please contact Jim Thatcher.

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- The key book on web accessibility: Constructing Accessible Web Sites
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