Web Accessibility

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Elements of Universal Usability

- Use correct structure
- Favor HTML over other formats
- Design for keyboard access
- Design for transformation
- Allow users to control their environment
- Separation of content and structure
Separation of content and structure

- HTML used properly builds structure into a web page.
- Style sheets can provide the visual formatting.
- Content encoded without display requirements can be accessed by any software or device.
Many of today’s Web documents make use of only the most basic tags.

On the surface an unstructured document may look no different that a structured one.

Tags such as BOLD, ITALIC, and FONT are meaningless.

Do not misuse structural tags for presentation purposes.
Gray’s Anatomy

<i>Gray’s Anatomy</i>

<cite>Gray’s Anatomy</cite>

Both display as italicized text. Only the 2nd one is universally identifiable as a book title.
W3 Priorities

- Priority 1 – a Web content developer MUST satisfy this checkpoint
- Priority 2 – a Web content developer SHOULD satisfy this checkpoint
- Priority 3 – a Web content developer MAY satisfy this checkpoint
Priority 1

- Provide a text equivalent for every non-text element
  - Images
  - Graphical representation of text
  - Sounds
  - Stand-alone audio files
  - Audio tracks of video
  - Video
Priority 1

- Web pages shall be designed so that all information conveyed with color is also available without color, for example from context or markup.
Priority 1

- Clearly identify changes in the natural language of a document's text and any text equivalents (e.g., captions).
Priority 1

- Organize documents so they may be read without style sheets.
Priority 1

- Ensure that equivalents for dynamic content are updated when the dynamic content changes.
Priority 1

- Until user agents allow users to control flickering, avoid causing the screen to flicker.
Priority 1

- Use the clearest and simplest language appropriate for a site’s content.
Priority 1 for image maps

- Provide redundant text links for each active region of a server-side map.
- Provide client-side image maps instead of server-side image maps except where the regions cannot be defined with an available geometric shape.
Priority 1 for tables

- For data tables, identify row and column headers.
- For data tables that have two or more logical levels of row or column headers, use markup to associate data cells and header cells.
Priority 1 for frames

- Title each frame to facilitate frame identification and navigation.
Priority 1 for applets and scripts

- Ensure that pages are usable when scripts, applets, or other programmatic objects are turned off or not supported.
- If this is not possible, provide equivalent information on an alternative accessible page.
Priority 1 for multimedia

- Provide an auditory description of the important information of the visual track of a multimedia presentation.
- For any time-based multimedia presentation (e.g., a movie or animation), synchronize equivalent alternatives (e.g., captions or auditory descriptions of the visual track) with the presentation.
If all else fails

- If, after best efforts, you cannot create an accessible page, provide a link to an alternative page that uses W3C technologies, is accessible, has equivalent information (or functionality), and is updated as often as the inaccessible (original) page.
Priority 2 Checkpoints

- Ensure that foreground and background color combinations provide sufficient contrast when viewed by someone having color deficits or when viewed on a black and white screen. [Priority 2 for images, Priority 3 for text].
Priority 2

- When an appropriate markup language exists, use markup rather than images to convey information.
- Create documents that validate to published formal grammars.
Priority 2

- Use style sheets to control layout and presentation.
- Use relative rather than absolute units in markup language attribute values and style sheet property values.
Priority 2

- Use header elements to convey document structure and use them according to specification.
- Mark up lists and list items properly.
- Mark up quotations. Do not use quotation markup for formatting effects such as indentation.
Priority 2

- Avoid causing content to blink (i.e., change presentation at a regular rate, such as turning on and off).
- Until user agents provide the ability to stop the refresh, do not create periodically auto-refreshing pages.
Priority 2

- Until user agents provide the ability to stop auto-redirect, do not use markup to redirect pages automatically. Instead, configure the server to perform redirects.
Priority 2

Until user agents allow users to turn off spawned windows, do not cause pop-ups or other windows to appear and do not change the current window without informing the user.
Priority 2

- Use W3C technologies when they are available and appropriate for a task and use the latest versions when supported.
  - Indicate the programming language you are using by starting your code with a document type declaration such as `<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN">`
  - Use the W3C Validation Service (http://validator.w3.org and W3C CSS Validation Service (http://jigsaw.w3.org/css-validator) to check your code.
Priority 2

- Clearly identify the target of each link.
Illinois Checkpoints not covered by W3C

- Provide a means of skipping past repetitive navigation links.
- Avoid using small images or text as links.
- Provide accessible HTML or text versions of downloadable documents whenever possible.
- Provide contact information.
- Test for accessibility.