

Accessibility Guidelines for CMS-Driven Sites

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Accessibility concerns hit the front page in February of 2006 when a blind University of California-Berkeley student sued Target Corporation for failing to consistently provide “alternate” text for images used on the retailer’s web site. The suit argued that the lack of any “alt” text violated the Americans with Disabilities Act (ADA) for discriminating against the blind, as screen-readers for blind or sight-impaired individuals can not interpret images on a site without the “alt” text.

While the question of whether websites are covered by the ADA is still open, the lawsuit has sparked greater attention on ensuring accessibility on web sites, and rightfully so. Accessibility conformance ensures that your site is accessible by all visitors regardless of disabilities, and should be a goal for any web site.

However, the subjective nature of accessibility guidelines, browser compatibility issues and a reliance on Content Management System (CMS) tools make it difficult to guarantee absolute accessibility conformance. To ensure long-term accessibility, content contributors and editors need a through understanding of accessibility guidelines and tools.

Entire books have been written on this topic. This paper is meant to be a brief but comprehensive overview.

Accessibility Guidelines: Setting a Standard

Two widely accepted accessibility checklists exist today:

- 1) **The World Wide Web Consortium (W3C) Web Content Accessibility Guidelines (WCAG) 1.0** – A series of guidelines that have been created by the W3C’s Web Accessibility Initiative;
- 2) **Section 508 of the Rehabilitation Act of 1973, as amended by the Workforce Investment Act of 1998 (Section 508)** – A set of legal requirements for federal sites and sites receiving federal funds.

Unfortunately, compliance with the accessibility guidelines laid out in these checklists is not determined by a simple test; there is no definitive “yes” or “no” to many of these points. Guideline 14.1 from the WCAG provides an example:

14.1 Use the clearest and simplest language appropriate for a site’s content.

This evaluation is subjective; no validation tool can judge whether a page meets this requirement.

However, the WCAG lays out several priorities that **must**, **should** or **may** be met to achieve varied measures of accessibility conformance. These priorities provide a strategic approach to web site design and content management that will ensure an appropriate level of conformance:

[Priority 1]

A Web content developer **must** satisfy this checkpoint. Otherwise, one or more groups will find it impossible to access information in the document. Satisfying this checkpoint is a basic requirement for some groups to be able to use Web documents.

[Priority 2]

A Web content developer **should** satisfy this checkpoint. Otherwise, one or more groups will find it difficult to access information in the document. Satisfying this checkpoint will remove significant barriers to accessing Web documents.

[Priority 3]

A Web content developer **may** address this checkpoint. Otherwise, one or more groups will find it somewhat difficult to access information in the document. Satisfying this checkpoint will improve access to Web documents.

WCAG “Double-A” Conformance

Most sites should aim for **WCAG Level “Double- A” conformance**, meaning that **the site meets all priority 1 and 2 guidelines**. For sites requiring strict Section 508 compliance, additional attention should be paid to those items that are not included in the WCAG guidelines (there are 5).

A full list of Priority 1 and 2 guidelines can be found on the WCAG’s site. Among the most prominent: **HTML and CSS code validation**.

Validation

Validation is a very specific test of whether or not the page’s markup and CSS are consistent with the W3C’s specifications for HTML and CSS syntax and code structure. As an example, the XHTML specifications require that all HTML tags are closed and that all image tags contain an ‘alt’ attribute.

One example and comparison of valid, and accessible content is demonstrated below.

Functional: The following code snippet will render a graphic on a browser page:

```

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Make it valid: While the code snippet displays an image, it is not yet valid; XHTML specification requires that an img tag include an alt attribute. Both of the snippets below will pass validation.

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Now Make it Accessible: While the snippets above will pass validation, both fail to provide equal access to the content for visually impaired visitors. The snippet below, uses alt text that provides the information conveyed in the graphic for non-visual users.

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Common misunderstandings about validation.

- **Validation does not mean that a site is accessible.** A site can use valid code though fail to provide even a minimal level of accessibility. On the other hand, validation is often a requirement on accessibility checklists.
- **Validation does not mean that a site will work in any browser.** The goal of the W3C specifications is to ensure that validated pages will render in any device (past, present, or future) that supports these standards. However, HTML and CSS validation are not enough to ensure that a site will work for all visitors in every browser.

- **Validation is not against a single standard.** The W3C has specifications for HTML 4.01 strict, transitional and frameset, XHTML 1.0 strict, transitional and frameset, XHTML basic, XHTML 1.1, CSS 1, 2.1 and 3. Each of these specifications has differing requirements. Code written to any of these specifications can validate though they are very different.

Browser Compatibility Does Not Equal Accessibility.

Browser compatibility should also not be equated with accessibility, though it is obviously a key component of an accessible site. Most sites on the web today work in the common browsers but would fail to validate or meet even basic accessibility rules.

Browsers are written to render documents based on various HTML and CSS specifications. However, they are extremely lenient with the specifications. It is possible to develop sites that do not validate to any version of HTML or CSS yet will still render properly across our entire line of supported browsers.

This lenient support for specifications, along with the dominance of an easily defined group of visual web browsers, and an interest in launching working products as quickly as possible and with a maximum return on investment means that browser compatibility is often where many sites and products draw the line in terms of accessibility. These products include most CMS tools. As we've outlined above, accessibility goes far beyond browser compatibility. Just because your site looks 'right' in various browsers does not mean it is accessible.

CMS Challenges to Accessibility Conformance

Duo aims to provide valid HTML and CSS and highly accessible sites with WCAG "Double-A" conformance. However, the use of CMS tools, both custom and third party, present challenges to ensuring this level of conformance after the site has launched. Two of the largest culprits: CMS tools that fail to produce valid XHTML markup, and content contributors and editors that fail to input accessible content.

Unless specifically marketed, no "off the shelf" CMS tool will produce 100% valid XHTML markup. An example of a CMS tool failing to produce valid XHTML was demonstrated by the automatic combining of multiple body tag attributes in Serena Collage. When combining the attributes, the attribute name was changed to uppercase, which will display fine in all browsers but will not validate. Another example is text editing tools that fail to properly encode characters such as "&". An unencoded ampersand will cause a page to fail validation. These could be considered bugs that can and should be fixed by the CMS author, however, the time and resources that are required to fix bugs that don't break a page are very hard to allocate.

The content editor problem is much more difficult to eliminate. Even if the CMS tool is designed or modified to produce 100% valid XHTML, the content itself may not be accessible. If an editor fails to provide proper alt text for an image, the page will fail to meet even the most basic level of WCAG or Section 508 accessibility conformance.

Other priority 1 guidelines are even more difficult to enforce such as the 14.1 item mentioned above, "Use the clearest and simplest language appropriate for a site's content."

The only real solution for this issue is for all content contributors to have a deep and complete understanding of the concepts of accessibility and accessible content. Regular policing and/or a strict workflow with thorough review of accessibility is a necessary step for long term conformance.

Summary

Accessibility is an important topic that will continue to be a larger and larger issue with large sites and government-supported clients. Producing highly accessible sites requires a deep level of attention during every phase of the site lifecycle. More information about accessibility guidelines and conformance can be found at:

WCAG 1.0

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

Section 508

<http://www.section508.gov/index.cfm?FuseAction=Content&ID=12>

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