

mStoner Coding Standards For Americans with Disabilities Act Conformance

Conformance to the Federal Requirement

The U.S. Department of Justice Americans with Disabilities Act (ADA) Standards for Accessible Design provide wide ranging guidelines for addressing accommodations for persons with disabilities. Stating “ADA Conformant” is not a metric, but a guiding principle or a statement on accessibility. For websites and computing systems to conform they must meet specific regulations.

ADA Section 508 contains regulations for information technology. These regulations have been issued in publication *S-40, Electronic Information Technology Accessibility Standards; Final Rule*.¹ Section 508, Subpart B contains §1194.22, the section that addresses standards for Web-based intranet and Internet information and applications.

Compliance with Section 508 Subpart B is intended to address the following disabilities:

- Blind Users
- Color Blind Users
- Users with weak vision that cannot read small text
- Deaf users
- Hard of hearing users
- Users that cannot use a mouse
- Users with disabilities like arthritis or other motor- control issues
- Photosensitive epilepsy – Uncommon but it is addressed by the standard

mStoner implements XHTML 1.0 Strict code. For ADA Section 508 compliance, we write compliant code using best practice software development techniques, and validate the code using the Cynthia Says validation site².

¹ Office of Technical and Information Services, Architectural and Transportation Barriers Compliance Board – Section 508 Standards - <http://www.access-board.gov/Sec508/preamble.htm>

² HiSoftware® Cynthia Says™ Validation Site – <http://www.cynthiasays.com>

The validation process tests and reports on the following 508 standards:

- A. 508 Standards, Section 1194.22, (a) A text equivalent for every non-text element shall be provided (e.g., via "alt", "longdesc", or in element content).
- 508 Standards, Section 1194.22, (b) Equivalent alternatives for any multimedia presentation shall be synchronized with the presentation.
- 508 Standards, Section 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.
- 508 Standards, Section 1194.22, (d) Documents shall be organized so they are readable without requiring an associated style sheet.
- 508 Standards, Section 1194.22, (e) Redundant text links shall be provided for each active region of a server-side image map.
- 508 Standards, Section 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.
- 508 Standards, Section 1194.22, (g) Row and column headers shall be identified for data tables.
- 508 Standards, Section 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.
- 508 Standards, Section 1194.22, (i) Frames shall be titled with text that facilitates frame identification and navigation.
- 508 Standards, Section 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.
- 508 Standards, Section 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.
- 508 Standards, Section 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.
- 508 Standards, Section 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) through (l).
- 508 Standards, Section 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.
- 508 Standards, Section 1194.22, (o) A method shall be provided that permits users to skip repetitive navigation links.
- 508 Standards, Section 1194.22, (p) When a timed response is required, the user shall be alerted and given sufficient time to indicate more time is required.

Conformance to the World Wide Web Consortium (W3C) Standard

In addition to ADA Section 508 conformance, mStoner performs additional validation against the W3C Web Content Accessibility Guidelines (WCAG) 1.0 standard³.

This standard has three levels of priority, based on the checkpoint's impact on accessibility.

- Priority 1: Satisfying this checkpoint is a basic requirement for some groups to be able to use Web documents.
- Priority 2: Satisfying this checkpoint will remove significant barriers to accessing Web documents.
- Priority 3: Satisfying this checkpoint will improve access to Web documents.

There are three levels of conformance:

- Conformance Level "A": all Priority 1 checkpoints are satisfied;
- Conformance Level "Double-A": all Priority 1 and 2 checkpoints are satisfied;
- Conformance Level "Triple-A": all Priority 1, 2, and 3 checkpoints are satisfied;

Conformance to the WCAG 1.0 standard overlaps conformance to the Section 508 standard, but provides additional validation checkpoints and guidelines. mStoner validates code using the Cynthia Says validator for WCAG 1.0. We achieve Level "A" conformance, and strive for "Double-A" conformance. In some cases we may achieve "Triple-A" conformance based on specific user requirements.

Additional Conformance Checking

mStoner also validates website code against the following validation services:

- Cascading Style Sheet (CSS) Validation - <http://jigsaw.w3.org/css-validator/>
- Basic XHTML Markup Validation - <http://validator.w3.org/>
- RSS Feed Validation - <http://validator.w3.org/feed/>
- WAVE Evaluation Tool: an annotated visual site validator - <http://wave.webaim.org/>

References

"Understanding Accessibility: A Guide to Achieving Compliance on Web Sites and Intranets"

Robert B. Yonaitis, HiSoftware Publishing, ISBN: 1930616031

e-book download: <https://www.hisoftware.com/subscribe.htm>

Illinois Information Technology Accessibility Act (IITAA) – Addresses not only the federal standards, but PDF, Flash and Java accessibility, and provides a more implementation-oriented set of practices. <http://www.dhs.state.il.us/page.aspx?item=32765>

"Applying the ADA to the Internet: A Web Accessibility Standard" Cynthia D. Waddell, JD, ADA Coordinator, City of San Jose. The first application of ADA principles to websites. <http://people.rit.edu/easi/law/weblaw1.htm>

³ Web Content Accessibility Guidelines 1.0 - W3C Recommendation 5-May-1999 - <http://www.w3.org/TR/WCAG10/wai-pageauth.pdf>