

# Making websites and PDFs accessible is not that hard.

The CDC estimates that 20% of Americans – some 60 million – have a disability. Of those, the largest and fastest type of disability is visual. (Think baby boomers moving from spectacles to screenreaders, and living longer than ever before.) Section 508 of the Rehabilitation Act (508, for short) requires agencies that receive federal funds to make their websites and downloadable PDFs accessible to people with disabilities. This article will:

- Identify 5 basic elements of an accessible, 508-compliant web site, and
- Provide resources you can use to evaluate your site and downloadable files for accessibility.

## Basic § 508 Checklist

### 1. Site uses markup and style sheets appropriately.

Use external style sheets so users can adjust the display of a page to meet their needs. A user with low vision can increase the font size, or a colorblind user can change the colors of the fonts. Make sure your pages are readable style sheets turned off so screen readers and Braille displays will still work.

Avoid tables or frames for design purposes as they may confuse screen readers.

If site uses JavaScript for pull-downs or fly-over displays, code uses *onclick* so users without mouse access can use the keyboard instead.

### 2. Make navigation easy.

Label all links clearly and meaningfully. Simple, consistent navigation (in terms of appearance, language, and position on the page) helps all users.

A site map and a search function to help users find what they want is a must.

### 3. HTML code specifies natural language and provides text equivalents to sound and images.

The html code specifies a natural language, which allows the screen reader to read the text. For English, use `<html lang="en">`; for Spanish use `<html lang="es">`.

Use **alt text** to convey the meaning or purpose of the image so screenreaders can interpret the image or explain its functionality. Even images without meaning, such as a line used to separate sections, need an empty alt text (`alt=""`) so a screenreader will skip over them.

For content in video or audio format, provide a **transcript** or **closed captions**. YouTube's closed caption feature automates this process. (Click on the CC icon.) *Caution:* You will have post-editing work.

### 4. Design, color, and layout meet W3C and § 508 criteria

**Design & navigation** work on a variety of devices, regardless of screen size (phones, PDAs, etc.) For many people, mobile devices are the preferred method of Internet access. A flexible layout that changes according to device/screen width allows your site to work on big and small screens. A flexible layout also costs less than producing a second mobile version as you will have only one site to update.

Color palette gives adequate contrast between colors. For best contrast, use dark colored fonts on a light background. And use **bold** or **dark colorblind-proof** colors to make subheads stand out.

Use resizable text so users can change it to meet their visual needs. Use **A+** **A-**, instead to signal size flexibility; screenreaders read "a" "a" "a". as a a a.

Important functions are not color-dependent, for ex., downloadable files or glossary items in **green** font.

Site works with color turned on or off.

View your pages without color at:  
[www.508compliant.com/tools.htm](http://www.508compliant.com/tools.htm).

**Tip:** HTML5 is easier to maintain than earlier versions. HTML5 markups are more intuitive and have more native support for screen reading and other assistive technologies/devices.



## Other Standards and Recommendations

**Follow W3C standards.** To ensure that all browsers, screen readers, and devices can display your pages, have your code validated by W3C. Go to: <http://validator.w3.org/>

**Provide context and orientation information.** Divide large blocks of information into smaller chunks to make it more manageable. Small paragraphs with clear subheads make your information easier to navigate. Group related information together so all users (including those with reading or cognitive disabilities) will be able to navigate your site more easily.

**Make language and layout clear and simple.** Use consistent page layout, easy-to-interpret graphics, and language that is easy to read and understand. Remember, the average American reads comfortably at the 5th grade level, 50% of consumers read only titles and subheads, and readers of all proficiencies benefit from text written and displayed with accessibility principles in mind.

**Allow users to control animated objects or pages.** Moving, blinking, scrolling, or auto-updating objects and pages may cause problems for users with visual, cognitive, or physical disabilities. Make sure your site allows users to pause or stop animation.

**Clarify natural language usage.** When language changes are clearly identified in the document, screen readers and Braille systems can switch to pronouncing or displaying words in the new language. Tags also help visitors unfamiliar with the language, as they allow them to use translators. Expand abbreviations using the "abbr" element, and acronyms using the "acronym" element.

**Ensure direct accessibility of embedded user interfaces.** Websites that use new technologies like Java are generally less accessible. However, if your site must use an applet, movie, or script with its own interface, you can still find ways to make it accessible. Java 2 now supports accessibility features through the javax.accessibility package. Flash also supports some accessibility features. Whatever features you use, remember to avoid making interfaces that rely on a mouse to be usable.

**Use URLs that are short and easy to remember.** Example: [www.montereycountyelections.us](http://www.montereycountyelections.us) is a user-friendly url that is intuitive and can be remembered easily. Title case lets the reader see the component words more easily: [www.MontereyCountyElections.us](http://www.MontereyCountyElections.us)

Use a url shortener if your url is too long or hard to remember or type.

**Usability Testing.** The only way to ensure that your website is truly accessible is to conduct testing with people with disabilities. Although web designers themselves can test for 508 guidelines, field-testing lets you evaluate your site from the consumer's perspective, helps you identify areas that need tweaking, and gives you a measure of confidence that you have created a site that truly offers equal access.

## Provide an accessibility statement.

We like this one from Alameda County:

*"Alameda County is currently utilizing the Section 508 standards as guidelines for developing new webpages. We are also reviewing existing webpages and utilizing the standards when updating them. We are using Cascading Style Sheets for all webpage layout, eliminating the use of tables. We are also designing the website navigation menus exclusively with style sheets and no images where possible. These innovative approaches to website design make the pages more accessible to our visitors utilizing assistive web technologies. As new websites are created and existing ones are updated, we will be applying these techniques so that eventually all webpages on our site will take advantage of the accessibility features that style sheets provide."*

## Resources:

### Tutorials:

Best practices: <http://juicystudio.com/index.php>

Accessible Java apps: <http://www.oracle.com/technetwork/java/javase/tech/index-jsp-136191.html>

Accessible Flash content: <http://www.adobe.com/accessibility/products/flash/best-practices.html>

alt text: [www.youtube.com/watch?v=LvDgp8yDh4M](http://www.youtube.com/watch?v=LvDgp8yDh4M)

Transcripts and captions: <https://support.google.com/youtube/answer/2734799?hl=en>

### Accessibility testing:

[www.508compliant.com/tools.htm](http://www.508compliant.com/tools.htm)

[www.cynthiasays.com/](http://www.cynthiasays.com/)

Firefox's Accessibility Extension, WAVE Toolbar, JAWS, Acrobat, full version

### Url Shorteners:

<http://tinyurl.com/>

[www.hongkiat.com/blog/url-shortening-services-the-ultimate-list/](http://www.hongkiat.com/blog/url-shortening-services-the-ultimate-list/)

