



Introduction to Web Accessibility

Web accessibility is one of the most important, yet most misunderstood topics in web design and development. Increasing pressure from litigation and potential changes to accessibility laws have brought the issue to the forefront. Accessibility lawsuits and corresponding website changes can cost companies thousands, even millions of dollars. Beyond the legal impact, inaccessible websites create negative, frustrating experiences for millions of people and lead to lost revenue for businesses selling online. With so much at stake, it is important for all involved in web projects to have at least a basic understanding of web accessibility.

WHAT IS WEB ACCESSIBILITY?

Web accessibility refers to the ability of persons with disabilities to access the content or enjoy the benefits of your website. When a website is not accessible, persons with certain disabilities struggle to accomplish basic tasks or find information.

Web accessibility issues impact millions of users. It is not only the completely blind and deaf who are impacted, but lesser maladies such as color blindness or low vision — which affects much of the aging population — also negatively impact a user's experience with an inaccessible website. For users with the most severe disabilities, assistive technologies — such as screen readers for the blind — must be used. The biggest accessibility issues of many websites involve the ability of users with assistive technologies to access content.

Web accessibility guidelines seek to address the challenges presented by inaccessible websites by codifying best practices for

creating websites that are easy to use for all users of all abilities. These guidelines target issues for users with visual, auditory, cognitive, and motor impairments.

WHO CREATES THE GUIDELINES?

The generally accepted industry standard guidelines are the Web Content Accessibility Guidelines 2.0 (WCAG 2.0). These guidelines were created by a working group within the W3C — world wide web consortium — as part of the W3C's web accessibility initiative (WAI). This body is generally responsible for creating standards for the web.

WHAT IS INCLUDED IN THE GUIDELINES?

The WCAG 2.0 is divided into four principles with three levels of conformance.

Each level of conformance has a different set of criteria that must be met. The levels range from A to AAA and build on one another. In other words, to meet AAA conformance, you must meet all A, AA, and AAA criteria. Generally, companies seek to meet either the A or AA level. In most cases that have received public attention, the final agreed upon standard has been AA. This has also been the standard advocated by the Department of Justice.

The principles are: perceivable, operable, understandable, and robust.

PERCEIVABLE. Perceivable refers to a user's ability to process information. Information that is not presented in a processable format is not accessible. Among other affordances, this means providing text for those who cannot hear, and audio for those who cannot see. It does not mean creating audio for all text, but content must be consumable by screen readers and other assistive technologies. Websites and apps that require sight or hearing won't pass the test of perceivability.

OPERABLE. People with disabilities need to be able to operate websites and applications with a variety of tools. Many users with disabilities cannot operate a mouse. Alternatives like keyboard-based operation should be implemented.

To help users with cognitive disabilities operate a website, animations and media should be controllable, and time limits for completing an action should be generous or configurable. Most importantly, sites and

apps should be forgiving. All people, not just those with disabilities, make mistakes. Offer second chances, instructions, cancellation options, and warnings to help all users.

UNDERSTANDABLE. If users can perceive and operate a website, that doesn't guarantee they can understand it. Understandable websites use clear, concise language and offer easy to comprehend functionality. If a user performs an action, the connection between the action and the result should be obvious. Navigation should be consistent across a site. Forms should follow a logical flow and provide clear labels. If a user must go through a process — like a checkout — adequate guidance should be provided. If this sounds like usability and not accessibility, that's because usable websites are inherently more accessible.

ROBUST. Users pick their own mix of technologies. Within limits, websites should work well across platforms, browsers, and devices to account for personal choice and user need. While users cannot expect a website to support Internet Explorer 1.0, sites should not dictate the technology users can use. When sites dictate supported technology platforms, they restrict access for any non-conforming user. One of the best ways to meet the principle of robustness is to follow development standards and conventions. Clean code is generally more robust and consumable across platforms and assistive technologies.

ARE THE GUIDELINES ENOUGH FOR CREATING AN ACCESSIBLE WEBSITE?

The guidelines are currently the best objective measure for testing a website's accessibility and have generally been accepted as the international standard for creating accessible websites. However, there's some debate within the web community — particularly by users with disabilities — over the success of the guidelines in creating truly accessible websites. It should be acknowledged that the web content accessibility guidelines will only take you so far. For best results, testing should include persons with disabilities to ensure that a WCAG conforming site is actually easy for these users to use with their assistive technologies.

IS WEB ACCESSIBILITY REQUIRED BY LAW?

In the U.S., web accessibility regulations exist for governments and companies serving the government. For private entities, the laws are not clear. Some courts have interpreted the Americans with

Disabilities Act as requiring website compliance. This has led to many companies deprioritizing web accessibility and taking a wait-and-see approach. However, given the steady increase of web accessibility related litigation, a wait-and-see approach is not advisable.

WHEN SHOULD WEB ACCESSIBILITY BE ADDRESSED?

Web accessibility is best addressed when a website is first designed and developed. This enables your team to create solutions that meet accessibility criteria with the least amount of effort. For example, if a design team knows they must design for a certain accessibility level, they will steer clear of certain font sizes and color combinations. If they don't have this expectation, they may design solutions that later need to be retrofitted to meet the WCAG's criteria. This can potentially cost many thousands of dollars if the design or coding standards used negatively impact multiple parts of a large website.

WHAT SHOULD BE DONE FOR WEBSITES THAT ARE NOT ACCESSIBLE?

All is not lost if you have a website that is not accessible. In general, everything that is done on the web can be done accessibly. In other words, you can fix your issues. The first step in this process is to understand your issues. You should conduct a thorough audit of your web properties or have one conducted for you. Using the Web Content Accessibility Guidelines, you should review all aspects of your website against your selected level of conformance, then create a plan to remedy any deficiencies. Oftentimes, this process will reveal issues that are easily addressed (e.g. adding alt text to images). These issues can be addressed quickly as a good-faith indicator of your company's commitment to accessibility.

The most important starting points are having a plan for addressing accessibility and ensuring your team understands and considers accessibility on all new projects.