

What is accessibility?

Accessibility involves two key issues: first, how users with disabilities access electronic information, and second, how web content designers and developers enable web pages to function with assistive devices used by individuals with disabilities.

For the user with a disability, the challenge is to identify tools that provide the most convenient access to web-based and other electronic information. For the web content designer/developer, the challenge is to remove the obstacles that prevent accessibility tools from functioning effectively. In many cases, these challenges are relatively simple to overcome, but sometimes the solutions require some additional thought and effort.

This section of the Adobe Accessibility Quick Start Guide addresses the following topics:

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Defining disabilities

The range of disabilities is broad and difficult to categorize; however, it is important to have some sense of the scope of the issue.

A 1997 report by the U.S. Census Bureau categorizes 19.6% of the U.S. population as having some sort of disability. Within that group are individuals with visual, hearing, cognitive, and motor impairments. Each category includes a much wider range of conditions. For example, visual impairments include limited vision, color blindness, and blindness. Disability categories can also include temporary disabilities; for example, someone with a broken wrist may have difficulty using a mouse but still needs access to the web to meet day-to-day job requirements.

At the same time, statistics about individuals with disabilities may be misleading. As people get older, most face a disability of some kind. While nearly 20% of the total U.S. population has a disability, as the population ages, the proportion of people with disabilities grows (see Table 1). In fact, almost 75% of the population over 80 years old has a disability. Thus, accessibility is not just about opening doors — it is about keeping them open. Accessibility allows people to maintain a level of independence that age would likely otherwise make difficult.

Table 1. Prevalence of disability by age: 1997

	Total number	With disability	Percent with disability
All ages	267,665,000	52,596,000	19.7%
Under 15 years	59,606,000	4,661,000	7.8%
15 to 24 years	36,897,000	3,961,000	10.7%
25 to 44 years	83,887,000	11,200,000	13.4%
45 to 54 years	33,620,000	7,585,000	22.6%
55 to 64 years	21,591,000	7,708,000	35.7%
65 years and over	32,064,000	17,480,000	54.5%

Resource: U.S. Census Bureau: Americans with Disabilities

Assistive technologies

Users with disabilities frequently rely on hardware and software to access web content. These tools, known as assistive technologies, range from screen readers to touch screens and head pointers.

Blind users of the web frequently use software called a screen reader to read the contents of a web page out loud. Two common screen readers are JAWS from Freedom Scientific and Window-Eyes from GW Micro. Screen readers enable users to hear, rather than read, the contents of a web page; however, a screen reader can read only text, not images or animations. It is desirable, therefore, that images and animations be assigned text descriptions that screen readers can read. These text descriptions are called alternative text, or alt text.

Users with mobility issues may rely on the keyboard instead of the mouse to navigate web pages. For individuals with nerve damage, arthritis, or repetitive motion injuries, use of the mouse may not be comfortable or possible. Using only Tab and Enter on the keyboard, it is possible for these individuals to negotiate a page with ease. Many users of the Internet have the capability to navigate without a mouse and are simply unaware of it. In Microsoft Internet Explorer, pressing Tab moves the focus of the browser among all available links on a page. (The dotted lines around links in Internet Explorer are an indicator of this capability.) Pressing Enter activates links, much like clicking a mouse.

In some cases, users may employ touch screens, head pointers, or other assistive devices. A touch screen allows an individual to navigate the page using her or his hands without the fine-motor control required by the mouse. A head pointer is simply a stick placed in a person's mouth or mounted on a head strap that the person uses to interact with a keyboard or a touch screen.

In these cases, it is very important that essential components of the page work without a mouse. Rollovers, pull-down lists, and interactive simulations are all examples of elements that typically depend on the mouse for user interaction. The designer or developer of these elements must ensure that keyboard-defined events are included along with mouse-defined events. A quick test using the keystrokes available in Internet Explorer can provide a valuable glimpse of the difficulties a web page may present for users with disabilities.

Accessibility standards

Accessibility standards help designers and developers of web content identify and address accessibility issues.

The Web Content Accessibility Guidelines (WCAG) from the World Wide Web Consortium (W3C) represented the first major effort to establish guidelines for accessible design. This standard consists of 14 guidelines, each with three checkpoint levels for web developers to meet: Priority One, Priority Two, and Priority Three.

In individual countries, national standards emerged later. Section 508 of the U.S. Rehabilitation Act is based on WCAG Priority One checkpoints. These same checkpoints serve as the basis for standards in Australia, France, Germany, and many other countries. The Common Look and Feel standard in Canada and Guidelines for U.K. Government Web Sites in the United Kingdom are based on Priorities One and Two of the WCAG.

Why is accessibility important?

Accessibility is an immensely important effort. Individuals and organizations with different functions will find different reasons to adopt accessibility. The following is a list of reasons many find compelling.

- **Accessibility is the right thing to do**
Accessibility represents an important step toward independence for individuals with disabilities. Accessible web pages provide access to fundamental government services and information such as tax forms, social programs, and legislative representatives. Accessible web pages also make possible a broader range of employment and educational opportunities by providing added means of communication. In addition, accessibility allows users with disabilities to participate in day-to-day activities many of us take for granted, such as reading a newspaper or buying a gift for a loved one.
- **Accessibility is the law for many institutions**
With new national requirements in the United States, Canada, and the European Union, and more to come in the near future, there are numerous legal mandates for accessibility. These policies will likely expand in scope. In the United States, for instance, Section 508 of the U.S. Rehabilitation Act sets standards for web pages designed or maintained by federal agencies. State and local governments as well as educational and nonprofit institutions around the United States are considering their own accessibility policies. For example, the University of Wisconsin at Madison adopted an Accessibility Policy requiring all pages published or hosted by the university to conform to all WCAG Priority One and Two checkpoints.
- **Accessibility offers benefits for all users**
As with many improvements intended for individuals with disabilities, the enhancements of accessible design offer benefits for all users of the web. Anyone who has pushed a shopping cart out of a grocery store can attest to the value of automatic doors and ramps cut into curbs. Similarly, accessible web pages are often easier to read, easier to navigate, and faster to download.
- **Accessibility uses innovative technology**
Accessible design is based on the premise that web pages must work with a broader range of browsers than only Netscape Navigator or Internet Explorer. A page must be accessible whether using a screen reader, a refreshable Braille display, or a head pointer. Making pages work in nonstandard browsers often makes them available to other consumer Internet devices, such as WAP-enabled phones or handheld personal digital assistants (PDA). The techniques of accessibility are based on recent technologies and design strategies. Older, static HTML designs often intermix content with formatting on web pages. Accessibility guidelines encourage the separation of formatting from content through the use of cascading style sheets (CSS) to allow more flexible use of content and easier implementation of more powerful dynamic models.
- **Accessibility creates market opportunity**

Accessibility offers the potential for organizations and businesses to reach new customers and new markets. As additional accessibility policies are adopted, the need among government and educational institutions for goods and services that support accessibility policy is growing. In the United States, businesses providing goods and services to the government via the web or other information technology should understand Section 508. Businesses that understand accessibility and comply with Section 508 have a strong market advantage, which is multiplied as local governments implement new policies