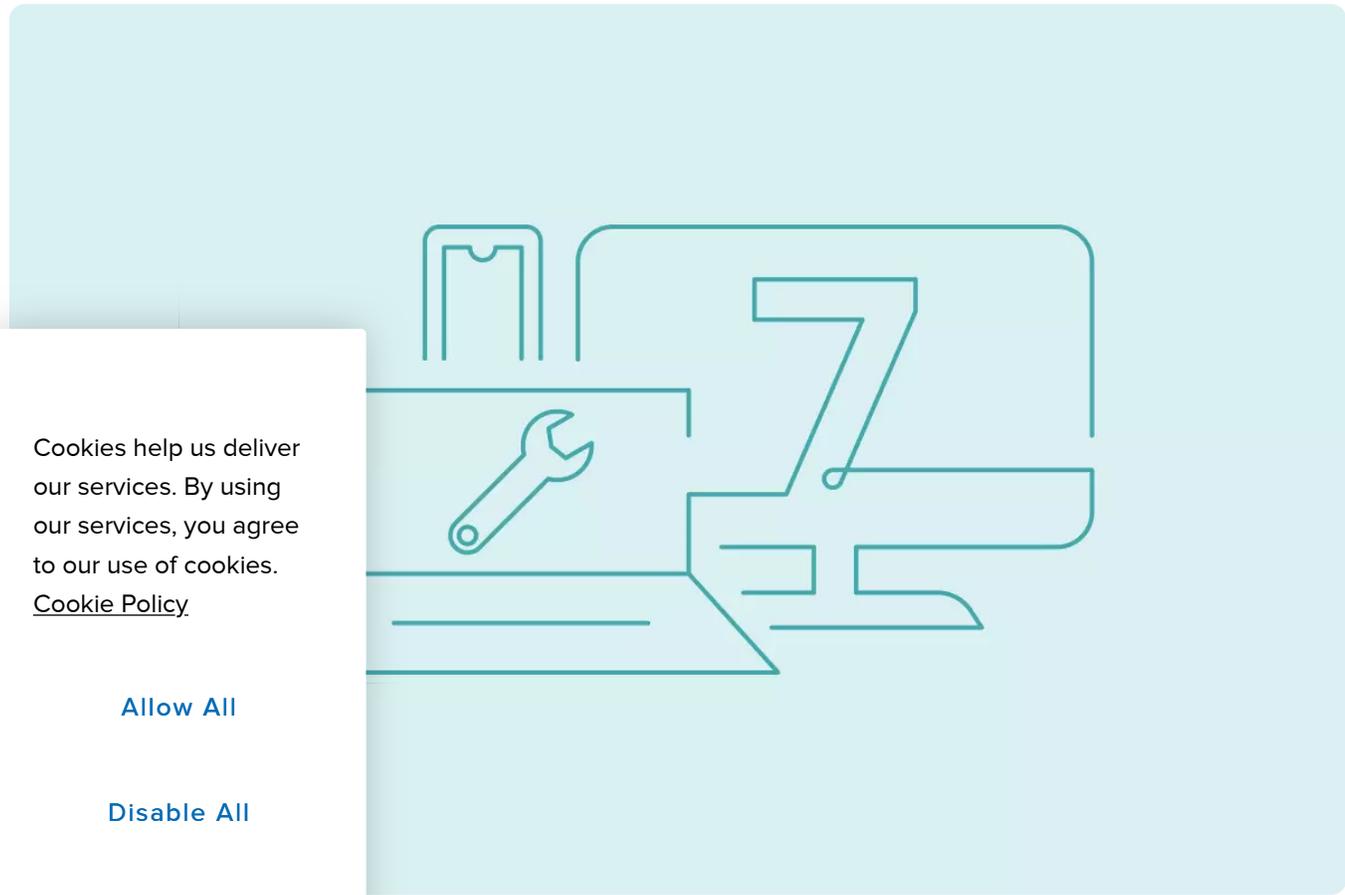**Acquia**

Accessibility & Inclusion

7 Tech Tools To Help People With Disabilities Access the Web

November 25, 2022 | **8 minute read**

Learn about seven assistive technology tools that help people with physical disabilities and visual impairment to access and explore websites.

Cookies help us deliver our services. By using our services, you agree to our use of cookies.
Cookie Policy

Allow All

Disable All

Cookies Settings

...ility and Inclusion

What is assistive technology? What are assistive technologies and website accessibility tools? What is website accessibility software used for and how does it help individuals with disabilities online?

Well, first things first. What is assistive technology? Put simply, assistive technology refers to any piece of equipment or software that enhances learning, working, and daily living for persons with disabilities.

Assistive technologies are nothing new. A pair or reading glasses, for example, is a kind of assistive technology. Web accessibility tools perform a similar function to a pair of eyeglasses, in that both the glasses and the accessibility tool function to allow a person with disabilities to perceive and interact with the external world. From this perspective, a wheelchair and an accessibility tool are fundamentally aiming for the same outcome — which is to help those with disabilities to have access to the things in life that others take for granted.

Website accessibility software can be leveraged by those with disabilities to help them be active online. More well known accessibility software examples include screen readers and screen magnifiers, which allow those with blindness and low vision to engage with online content. These accessibility software examples are merely the tip of the iceberg, however, in terms of the technology that now exists to help those with disabilities navigate the web.

If you are not a person with a disability, then you probably take it for granted that you can easily control a mouse, type on a keyboard, or click to select options when browsing online without the need for assistive technology. Now imagine doing these same online tasks without being able to see, or without being able to move your hands. Suddenly, the web is looking like a completely different place – one which is full of hurdles and limited access. Website accessibility _____ hurdles and break down the barriers that still exist for disabled users.

___ple with disabilities has been a concern since the birth of the web, and ___ative (WAI) was formed in 1997 by the World Wide Web Consortium ___rds for web accessibility. However, only now is web accessibility really ___n. Most countries still don't have any laws about web accessibility, ___with disabilities often cannot access and use websites, including ___ public sector websites such as for healthcare.

___bsite accessibility on your site, you can start by learning about the WAI ___site accessibility tools to check your website's accessibility. However, ___far. To really improve web accessibility, you need to understand how ___e the web using assistive technologies and accessibility software. ___ to make the meaningful changes which allow all people, including ___echnologies and web accessibility tools, equal access to your

Cookies help us deliver our services. By using our services, you agree to our use of cookies. Cookie Policy

Allow All

Disable All

Cookies Settings

website.

Web access tools for people with visual impairments

1. Screen readers

A screen reader is a web accessibility software tool which reads text on the screen with a speech synthesizer or (less frequently) translates it into Braille. But screen reader technology isn't as simple as reading every single word on the screen (most web users only read about 20% of what is on the page, so imagine how annoying it would be if screen readers read everything from the advertisements to the footer!). Good screen reader technology will give visually impaired people options to easily control what is read, such as by finding strings of text on the screen, reading just a line of text, or reading just text in bold or certain color text. Some popular screen readers include:

- COBRA
- Hal
- JAWS (Job Access with Speech)

2. Braille keyboards

A Braille keyboard is a piece of assistive technology that is very different from a standard QWERTY keyboard. There are 8 keys which are used to compose the Braille letters. Of course,
TY keyboards which have Braille letters overlaid on them, but Braille
way which makes navigation and locating the cursor much easier for

braille displays

yboard which also has output options. It contains small pins which can
le letters. Displays range from 18 to 84 cells. A cursor allows the user
nslate, and the pins are refreshed throughout the reading process.
expensive but are good options for people who use the computer a lot,
t the same time, or who are deaf-blind and would not be able to use a

nifiers

ology refers to web accessibility software that helps people who are

visually impaired but not blind to view information on a computer screen. There are numerous types of screen magnification technology, such as external devices which act like magnifying glasses outside of the screen to advanced software which is installed on the computer. The best screen magnifying technology doesn't just increase the size of the information on the screen, but has functions like reducing glare, increasing contrast, and improving cursor tracking.

Web access tools for people with physical disabilities

5. Sip and puff systems

Have you ever seen a person in a wheelchair controlling movement by breathing into a straw? This is a puff-and-sip system. The technology has been adapted to allow people with physical disabilities, such as paralyzed people, to also access the computer. The accessibility tool works similarly to a joystick, but one which is controlled with breath. It recognizes sips or puffs and translates these into commands such as mouse clicks or keyboard characters. Such assistive technologies are a true lifeline for many as they give back a measure of physical control to those with extremely limited physical capabilities.

6. Hands-free mouse tracking

There are now many truly-amazing ways which physically-impaired people can control a cursor without having to rely on a mouse or keyboard commands. One option is FaceMouse, which turns a standard web camera into a mouse operator. It does this by recognizing face or head
[ ]g them into commands, like clicks. Basically, you get to use your head
[ ] FaceMouse even lets users set certain movements to certain
[ ]outh" to "Enter Key."

Cookies help us deliver our services. By using our services, you agree to our use of cookies.
Cookie Policy

[ ]free mouse tracking is to use Lomak, which is a light-operated mouse
[ ]vice with a laser pointer is worn on the head (or, alternatively, on the
[ ] to point the laser light at various points on the keyboard or screen,
[ ]or. The Lomak keyboard is also controlled by the laser light, and has
[ ]lled confirmation of commands.

Allow All

Disable All

[ ]Edge system. This truly-cool system works by having a specialized
[ ]elow the screen. The video camera observes the user's eyes to
[ ] is looking. The user then operates the system by looking at special
[ ]on the control screen.

Cookies Settings

7. Voice controls

Voice control accessibility software includes programs that convert Speech to Text, and also allow you to command the computer with your voice. One of the most well-known and feature-rich web accessibility software programs is Dragon. It lets you enter text anywhere you find a text box and you can even tell it where to put the cursor. The accessibility tool isn't perfect though and people with physical disabilities will need to rely on other tools such as switch activations to fully access the web.

Website owners – accessibility is your responsibility

Bear in mind that none of these assistive technology tools are perfect, and they can be costly. Further, in order for many of the tools to work properly, the website must be designed in a way which allows accessibility. If you don't put meaningful alt text on images, then even the best screen reader won't help blind people understand the image. If you don't space call-to-action buttons well apart, then even people using the best hands-free mouse are going to have some wrong clicks. The bottom line? Website owners need to make sure their sites are designed in a way which doesn't just meet accessibility guidelines, but in a way which allows all people to equally access and use the web.

As an essential part of the day to day lives of millions, assistive technologies are not going anywhere. As the online world continues to grow and develop, so too will the range of website accessibility tools and assistive technologies available. If your website is designed and maintained with assistive technologies in mind, however, you can ensure that those who are reliant on website accessibility tools and accessibility software can use them successfully on your website.

e friendly to assistive technologies, it is first important to become
ds of web accessibility tools that are out there, and how exactly these
e used in practice. Try to put yourself in the shoes of those with a
nent when creating new online content and consider what web
ght require to get the most out of their experience. Remember, a web
seful if the website it is being used on is compatible with it.

Cookies help us deliver our services. By using our services, you agree to our use of cookies. Cookie Policy

Allow All

Disable All

Cookies Settings

Andy Parker

Former Digital Marketing Manager

Keep Reading

7, 2024

ility Webinar

: An Intersection of Design, Tech, and Content

Blog Article - **1 min**

DrupalCon Lille: Why Accessibility and Inclusion Matter

Several conference events underscore the values of accessibility and inclusion for the Drupal community

Drupal

Blog Article - 5 min

Our Path to Building Accessible Software for All Users

Empathy is central to Acquia's values and culture, and we reflect it by building accessible software.

Accessibility & Inclusion

Contact Us ▌

Copyright © 2025 Acquia, Inc. All Rights Reserved. Drupal is a registered trademark of Dries

Buytaert.

Cookies help us deliver our services. By using our services, you agree to our use of cookies.
Cookie Policy

Allow All

Disable All

Cookies Settings