Making Information Accessible

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July 2020

Secretary of State offices often face many challenges. One of these is the never-ending evolution of technology. As technology evolves, there is one thing that is a constant, the need to make information accessible to all individuals. Not only to tech-savvy users, but everyone (non-tech-savvy, young/old, disabled, etc.) who may use their software.

What does it mean to make information accessible through technology? In the context of technology, accessibility refers to providing equal "access" to software services, regardless of one's disabilities. In practice, this means providing accommodations for those who may otherwise be physically or mentally restricted. Providing these accommodations ensures that all content and information conveyed to the public is viewable and understandable by people of all physical and mental abilities. Accessibility is a critical component of all successful software solutions.

Accessibility Issues

Individuals everyday interact with state government websites, applications, portals, and more. Through the Americans with Disabilities Act (ADA), every individual is guaranteed the right to access public services. With technology continuing to expand and grow, so does this all-encompassing Act. This Act was signed into place in 1990 when the internet, as we know it today, was still in its infancy. Today we experience near constant updates to technology and applications, enabling us to communicate with each other in many new ways. With these advancements in technology, there have been updates made to the rules and statutes surrounding this Act and others. This infrastructure is there for not only specific companies and agencies to abide by, but almost all entities, government or commercial.

Many state laws require government (and often private) websites to adhere to guidelines provided in the *Web Content Accessibility Guide (WCAG 2.0)*.[i] Some of these state and federal laws originate from Section 508 of the Rehabilitation Act of 1973 and the ADA.

The first amendment of Section 508 of the Rehabilitation Act of 1973, happened in 1998, requiring federal agencies to make their electronic and information technology accessible to people with disabilities. In 2017 the US Access Board issued a final rule into effect that updated accessibility requirements covered by Section 508 and refreshed guidelines subject to Section 255 of the Communications Act. These updates modernized the requirements both in the US and abroad, including standards issued by the European Union, the World Wide Web Consortium (W3C), and Web Content Accessibility Guidelines, a globally recognized voluntary consensus standard for web content and Information and Communication Technology (ICT).[ii]

While Section 508 was written to apply only to federal agencies, many states have passed their own laws requiring Section 508 compliance. The list includes states like California, New York,

Virginia, and more[iii]. While not legally required, other states can avoid costly lawsuits by using Section 508 as a standard for accessibility compliance.

Actions Taken by Individuals

In 2019 the *Robles v. Domino's* case established that sections of the Americans with Disabilities Act (ADA) which refer to physical locations, may also be applied to digital storefronts like websites and mobile apps.[iv] This example has led to added responsibility placed on companies and governments to make sure they abide by the ADA as well as section 508 of the Rehabilitation Act of 1973 .

On October 7, 2019 the Supreme Court declined to hear the case *Robles vs. Domino's*, allowing the lower court decision to stand, and in 2018, over 2,000 web accessibility lawsuits were filed, with 2019 on track to surpass that number according to data projections through September.[v] Even before this decision, 1,906 accessibility lawsuits had already been filed. While there are multiple states that lead the pack (NY, FL, CA), many states are impacted by these lawsuits, and it is anticipated that these cases will only become more common in the future.

The Need for Accessibility

Accessibility is a moral imperative by state and federal governments. Citizens have a right to access government services paid for by their taxes, regardless of their disabilities. It is likewise critical when choosing external software providers, to choose contractors who share these values, and are committed to providing accessible experiences to users.

One often-forgotten element of accessibility is user experience. All government and private entities strive to provide users with interfaces that are clean and simple to navigate. This process of designing an application to be easily understood and navigated makes an application more "accessible" to all users, even those without typical disabilities. Contrary to popular belief, websites don't need to look like they were designed in 1990 in order to be accessible. Modern designs and styling contribute to making an application more accessible to everyone.

Accessibility Resolutions

Accessibility includes providing access to an application for people who may otherwise not be able to access it. There are many groups of people for whom special consideration must be taken to ensure they have access to an application. Some of these groups of people include:
- People with visual disabilities
  - These conditions include but are not limited to:
    - Blindness, total or partial

- Low vision (Cataracts or other vision impairments)
- Color-blindness
  - Resolutions:
    - Applications must be navigable via a screen reader.
    - User interfaces must have an appropriate color contrast.
    - Colors used should not be able to be misunderstood by people with forms of color-blindness.
    - Video and images should be adequately described for those who cannot see them.
    - User interfaces should support increasing font sizes and zooming in and out.
- People with auditory disabilities
  - These conditions include but are not limited to:
    - Deafness, total or partial
  - Resolutions:
    - Audio content must be transcribed and available as captions or summaries.
- People with motor impairments
  - These conditions include but are not limited to:
    - People who are unable to use a traditional keyboard and mouse
    - People who cannot use a touch screen
    - People who must navigate via voice commands
  - Resolutions:
    - Applications must be navigable without a mouse.
    - Applications must be navigable without a standard keyboard.
    - Applications must not interfere with non-traditional input devices like joysticks, trackballs, or voice control.
- People with cognitive impairments
  - These conditions include but are not limited to:
    - People with a reduced vocabulary
    - People with memory impairments
    - People with less-than-typical levels of education
    - People unacquainted with the unique vocabulary of a certain subject
  - Resolutions:
    - Text content should be short and easy to understand.
    - Complicated language should be avoided.
    - Text content should be understandable to people with a wide range of vocabularies.

PDF Accessibility

Accessible web content includes any content distributed via a website. "Some common examples of Web content technologies include HTML, CSS, SVG, PNG, PDF, Flash, and JavaScript."[vi]

PDFs are considered web content; however, PDFs are not accessible by default. To be considered accessible, PDFs must have real text content instead of static images of text, PDFs must also be "tagged" to provide screen readers with semantics for the document. For example, images are "tagged" as images, tables are "tagged" as tables, etc. This hints to screen reader software how to announce content on the page.

Tagging a PDF is typically a manual process accomplished using Adobe Acrobat. This becomes a problem when you are generating dynamic PDFs, which may be different every time they are generated, and tagging them manually is infeasible. Before now, using existing software to automatically tag PDFs has come with significant tradeoffs. PDF styling is often severely limited, as many auto-tagging software solutions rely on outdated browser technologies like Internet Explorer. This is also a highly complex process, and thus is typically very expensive.

Recent advances in auto-tagging technology provide new opportunities for government agencies to provide accessible documents to their users. These technologies, pioneered by Tecuity, accurately tag PDFs using modern browser technologies, and are capable of being hosted in any server environment, including cloud providers.

PDFs tagged through Tecuity's process may also use any modern styling techniques. There is no tradeoff between accessibility and aesthetics. Through this process, legacy, image-only documents may also be tagged with any existing data.

Using these processes helps guard government agencies from the threat of lawsuits over inaccessible web content. Tecuity leverages these technologies to ensure that our customers can provide fully accessible services to their users.

Conclusion

The need for technology to be accessible is apparent, from both a legal and moral standpoint. To reach this goal, agencies and departments should adopt forward-thinking technologies that meet these demands today and are backed by a trusted vendor with the experience to adapt their solutions to future demands. Building these partnerships today will help agencies and departments ensure compliance with state and federal law, and provide all constituents with equal access to important government services.

About Tecuity

Tecuity was founded in 2005 and since that time has been a leading software innovator to state and local government. Tecuity is committed to incorporating forward-thinking, results-driven technologies into our software solutions. We continue to push the envelope forward by integrating smart technologies to provide state and local governments the ability to easily interact, communicate, and do business with citizens.

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[i] "Web Content Accessibility Guidelines (WCAG) 2.1." Edited by Andrew Kirkpatrick et al., *W3C*, 5 June 2018, www.w3.org/TR/WCAG21/.

[ii] "IT Accessibility Laws and Policies." *IT Accessibility Laws and Policies | Section508.Gov*, July 2020, www.section508.gov/manage/laws-and-policies.

[iii] "State Policy." *State Policy | Section508.Gov*, July 2020, www.section508.gov/manage/laws-and-policies/state.

[iv] Kate Cox - Oct 20, 2019 2:15 pm UTC. "Accessibility, the Future, and Why Domino's Matters." *Ars Technica*, 20 Oct. 2019, arstechnica.com/tech-policy/2019/10/accessibility-the-future-and-why-dominos-matters/.

[v] Launey, Kristina M., and Seyfarth Shaw LLP. "Search Results for Accessibility Lawsuits 2019." *ADA Title III*, 24 June 2020, www.adatitleiii.com/?s=accessibility+lawsuits+2019.

[vi] "Web Content Accessibility Guidelines (WCAG) 2.1." Edited by Andrew Kirkpatrick et al., *W3C*, 5 June 2018, www.w3.org/TR/WCAG21/.