

Accessibility in E-Government

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INTRODUCTION

Access to government-created digital content has come a long way since the early days of the Web. The growth of Internet usage coupled with advances in technology and reduced costs has made the use of Electronic Government (E-Government) resources and websites a primary means of content access for citizens in the United States. According to the latest census and national records, over 86% of the US population has access to the Internet with a continued growth rate of 7% from the previous year. (Internet Users by Country, 2014) However, as illustrated by the Healthcare.gov website launch in 2013, technological, accessibility, and usability issues can seriously hinder and cause detrimental effects for user relying on these services. How content is presented and delivered on the Web makes an impact on how effective and helpful it is, but even more so for users with disabilities. This paper will cover the methods and standards of digital government content, the compliance with accessibility guidelines for disabled users, current challenges, and possible avenues of future delivery methods.

Web accessibility as defined by the World Wide Web Consortium (W3C) is the means by which anyone regardless of physical or cognitive disability can use and operate a website (W3C Introduction to Web Accessibility, 2005). People with disabilities or normal aging considerations find it difficult if not impossible to use technology that nondisabled individuals could use freely. For example, a blind user visiting a website must rely on screen-reading technology to interpret the site while a nondisabled user can browse it without any additional assistance. In order to achieve accessibility in their websites, a number of rules

and guidelines have been developed by the federal government. In 1998, congress amended the Rehabilitation Act of 1973¹ with Section 508 to require federal agencies to make electronic and information technology accessible to people with disabilities. Section 508 was enacted to eliminate barriers in electronic and information technology by requiring that disabled users have access to government information that is comparable to the access available to others without disabilities (www.section508.gov).

While accessibility focuses on the ability for all users, regardless of disability, to interact with content, another attribute is also important. Usability is how effectively, efficiently and satisfactorily a user can interact with a user interface (Chou & Hsiao, 2007). A focus on usability implies that a site is designed for easier access of content and information, which affects all users. The International Organization for Standardization (ISO) interprets usability as effectiveness, efficiency and satisfaction with which the user achieves specific goals in the specified context of use (ISO, 1998). Although not as strictly defined or required like Section 508, The U.S. Web Design Standards were developed as the U.S. government's very own set of common components and designs for websites. It's structured to make things easier for government site developers, while raising the bar on what users expect from their digital experience. Many of these standards are built upon the existing section 508 standards in hopes of taking them one step further.

Since the adoption of Section 508, compliance has been slow, but steady. However, technology advances quickly, and with it comes new challenges and concerns that were not considered in the original requirements. The advent of the

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mobile revolution has highlighted an accessibility dilemma with web sites that were never intended for use on small devices. With global mobile phone use at an all-time high, developers are racing to adapt content to fit these new screens. It is important to understand the current criteria put down in Section 508 to define accessibility standards, what constitutes compliance, and what updates need to be applied to accommodate for the advent of mobile usage. Furthermore, advances in mobile technologies and the shift to mobile app usage have raised additional questions, such as how the platform can become an interactive, dynamic process rather than the traditional passive distribution of content. Generating greater user engagement that translates into information access, service utilization, and participation in government decision helps both empower the user and provide valuable feedback to the government. Usability and accessibility will present challenges to citizens' acceptance and adoption of more advanced services and will influence their day-to-day interactions with e-government websites (Clemmensen & Katre, 2012).

BACKGROUND

The design and accessibility of government websites today is driven by a particular set of criteria known as Section 508. This amendment, which went into effect in June 2001, requires all federal agencies to comply with accessibility standards administered by the Architectural and Transportation Barriers Compliance Board (referred to as the Access Board)². These standards ensure that electronic and information technology is accessible to disabled persons to the extent it does not pose an "undue burden" on an agency. When Section 508 went into effect, federal agencies could no longer procure noncompliant electronic and information technology (Charles, 2001). Therefore, vendors who supply hardware, software, web sites, and other information technologies, have to ensure

compliance with Section 508 in order to be eligible for government contracts. The original standards were organized into three areas including: accessibility of operation and information, compatibility with peripheral devices, and documentation and services associated with electronic and information technology. Although mobile devices and tablets are not specifically listed, the inclusion of "web sites" as information technology necessitates that they be accessible regardless of the target output, whether it is desktop or mobile.

The U.S. Access Board's Section 508 web site summarizes each section of the technology standards as they apply to users with disabilities. These standards focus on assistive technologies (such as screen reader devices for blind users) and alternative technologies (e.g., keyboard navigation instead of mouse navigation) that allow access to those with disabilities. However, not all standards can be broadly applied to every device that accesses the Web. Established in 2000, the original Section 508 standards have become antiquated with current technology. While the standards were intended for traditional desktop websites, they were not considered for mobile sites. Since 2006, the Access Board has attempted to update these guidelines to account for new technologies (2006). On February 18, 2015, the Board released a proposed rule updating the 508 Standards and the 255 Guidelines. The Board held public hearings on the proposed rule in San Diego, Washington, DC and Salt Lake City. However, as of November of 2015 no official changes have been enacted (U.S. Access Board, 2015).

WEB ACCESSIBILITY

It is important to understand the history that drives Section 508 and the changes being put into place by the current proposal. The W3C, as the standards setting body for the Web, provided support to the Web Accessibility Initiative (WAI) in the development of Web Content Accessibility

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