

# Preserving State Government Digital Information Minnesota Historical Society

## Web Content Accessibility White Paper

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### *Abstract*

*Making web content accessible to people with disabilities improves accessibility for everyone. This white paper summarizes Internet accessibility standards and regulations that apply to state government entities, discusses the rationale for making improvements, and identifies resources that address ways to implement accessible web design.*

### *DISCLAIMER:*

*This white paper is a topical overview and nowise intended to offer legal advice. Consult an attorney for assistance with specific concerns or for advice.*

*Any comments, corrections, or recommendations may be sent to the project team, care of:*

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## Introduction

Making web sites accessible to users with disabilities is not just a legal obligation; it fully realizes the potential of the Internet to improve access to information and participation in government for all users. Creating accessible web pages can improve search engine page rankings that make content easier for all citizens to locate and use. Google's T.V. Raman suggests, "...you can think of the Google crawler as the world's most influential blind user."<sup>1</sup> Good, useable design can reduce the time required to maintain web pages as well. Knowbility.org cites a project where maintenance costs were reduced by sixty-six percent<sup>2</sup>. And anyone trying to access the web with old equipment, slow connections, or under less than optimal conditions will benefit from accessibly designed web sites.

Lack of familiarity with accessible design standards, the perception that these standards are expensive to implement and the expectation that accessibility provides no return on investment may contribute to the relatively poor rate of implementation. A 2008 Brookings Governance study found that only twenty-five percent of federal web sites and nineteen percent of state web

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<sup>1</sup> <http://googlewebmastercentral.blogspot.com/2008/03/tips-for-making-information-universally.html>. [accessed 11/19/2008]

<sup>2</sup> <https://www.puc.state.tx.us/electric/projects/34610/Tasks/32/Task32Accessibility101.pdf> [slide 26] [accessed 11/19/2008]

sites are accessible to the disabled. To date, lawsuits filed by organizations such as the National Federation for the Blind<sup>3</sup> have not had much effect on compliance but that may change in the future. Target Corporation recently settled an Internet accessibility lawsuit out of court, in part because they may have expected the interpretation of Title III of the 1990 Americans with Disabilities Act to be extended to commercial web sites<sup>4</sup>.

State and local governments are included in the definition of public entities in Subtitle A, Title II of the Americans with Disabilities Act which states that, “no qualified individual with a disability shall, by reason of such disability, be excluded from participation in or be denied the benefits of services, programs, or activities of a public entity, or be subjected to discrimination by any such entity.”<sup>5</sup>

The National Center for State Courts states, “Absent definitive case law, some debate remains about whether the ADA applies to Web sites. However, the U.S. Department of Justice has stated its position that Title II of the act extends to state and local government Web sites.<sup>6</sup> Additionally, on May 7, 2007, the U.S. Department of Justice (2007) released chapter 5, “Website Accessibility under Title II of the ADA,” as a component of its ADA Best Practices Tool Kit for State and Local Governments.<sup>7</sup> Thus, a proactive approach to the accessibility of a court Web site can prevent lawsuits.”<sup>8</sup>

There are two major web standards that specify how to make web content accessible for people with disabilities: the W3C Web Content Accessibility Guidelines (WCAG) published in May 1999 and US Section 508 of the Rehabilitation Act of 1973 as amended, published in December 2000. Sixteen states have adopted formal accessibility standards of their own.<sup>9</sup> Most state standards and guidelines have been based upon Section 508 and some incorporate the W3C Accessibility Guidelines also. The Section 508 standards are not a part of the ADA.

Currently, the WCAG 1.0 standards are in the process of revision to WCAG 2.0<sup>10</sup>, and Section 508 standards are being reviewed with an eye toward making changes that will bring them more in line with the new W3C standards.<sup>11</sup> In section 4.3 of its April 2008 report to the Access Board on the proposed revision, the Telecommunications and Electronic and Information Technology Advisory Committee review states its concern about the proliferation of Section 508 variations cropping up as states each adopt their own standards, “because harmonization allows advocates to focus their efforts on fewer standards development activities. It is this economy of focused effort that may offer the greatest net benefit to people with disabilities.” Towards this end, they

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<sup>3</sup> <http://www.nfb.org/nfb/Default.asp> [accessed 11/19/2008]

<sup>4</sup> [http://www.dralegal.org/cases/private\\_business/nfb\\_v\\_target.php](http://www.dralegal.org/cases/private_business/nfb_v_target.php) [accessed 11/19/2008]

<sup>5</sup> <http://www.ada.gov/pubs/ada.htm#Anchor-Sec-47857> [accessed 11/19/2008]

<sup>6</sup> <http://www.usdoj.gov/crt/foia/ta1712.txt> [accessed 11/19/2008]

<sup>7</sup> <http://www.ada.gov/pcatoolkit/chap5toolkit.htm> [accessed 11/19/2008]

<sup>8</sup> <http://www.ncsconline.org/WC/Publications/Trends/2008/TecManDisabilityTrends2008.pdf> [accessed 11/19/2008]

<sup>9</sup> <https://www.puc.state.tx.us/electric/projects/34610/Tasks/32/Task32Accessibility101.pdf> [accessed 11/19/2008]

<sup>10</sup> <http://www.w3.org/TR/WCAG20/> [accessed 11/24/2008] The W3C Proposed Recommendation was issued 03 November 2008 and the final version of the standard is expected in December 2008.

<sup>11</sup> <http://www.access-board.gov/sec508/update-index.htm> [accessed 11/19/2008]

have recommended that all jurisdictions should come into alignment with the international WCAG standards.<sup>12</sup>

Dynamic content presents a particularly thorny problem for accessible design. Assistive technologies used by people with disabilities cannot, in most circumstances, interpret the code used to create it. “Often called, the JavaScript Accessibility Problem – in XHTML and HTML, most elements have defined semantic meanings such as headers, lists, and table cells. Assistive technologies understand these elements and present them to users in an understandable way. But script technologies, such as JavaScript, create an accessibility problem by allowing markup language elements to be re-purposed to create interactive application widgets. When this happens, the markup no longer expresses the semantic information needed by assistive technologies.”<sup>13</sup> The W3C Web Access Initiative (WAI) working group issued the first draft of standards to address the problem of Accessible Rich Internet Applications (ARIA) in 2006.<sup>14</sup> This approach combines previous work done on an XHTML Role Attribute Module and adds semantic specifications for a States and Properties Module. The W3C maintains a wiki for the WAI-ARIA initiative with links to the project roadmap and most recent specifications.<sup>15</sup>

While the W3C initiative seeks a comprehensive solution to dynamic content accessibility, some programmers have decided to create mashups that solve one problem at a time. Projects like Scriptingenabled.org<sup>16</sup> make use of open Application Program Interfaces (APIs) to build more disability-friendly interfaces for existing web sites. A notable example is the You Tube interface that makes this website easier for people with cognitive disabilities to use.<sup>17</sup>

Another innovative approach taken to address Internet accessibility problems is the IBM Social Accessibility Project that taps a community of users to improve accessibility by creating metadata to transform a web page without changing the content of the original, thereby providing a way to work around page designers who do not adhere to standards.<sup>18</sup>

Regardless of the path taken to improve Internet accessibility, designers and users alike agree that there is no substitute for including disabled users in the testing process. Knowablity.org outlines the basic steps to creating accessible web sites:

- 1) Convene wide group of stakeholders
- 2) Adopt explicit policy
- 3) Provide support, including training and internal resources
- 4) Develop implementation plan
- 5) Test, verify, use feedback loops
- 6) Include people with disabilities throughout process

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<sup>12</sup> <http://www.access-board.gov/sec508/refresh/report/#43> [accessed 11/19/2008]

<sup>13</sup> [http://www-03.ibm.com/able/open\\_computing/wai.html](http://www-03.ibm.com/able/open_computing/wai.html) [accessed 11/19/2008]

<sup>14</sup> [http://findarticles.com/p/articles/mi\\_m0EIN/is\\_2006\\_Sept\\_26/ai\\_n16837595](http://findarticles.com/p/articles/mi_m0EIN/is_2006_Sept_26/ai_n16837595) [accessed 11/19/2008]

<sup>15</sup> <http://esw.w3.org/topic/PF/ARIA/BestPractices/Introduction> [accessed 11/19/2008]

<sup>16</sup> <http://scriptingenabled.org/> [accessed 11/19/2008]

<sup>17</sup> <http://www.iheni.com/easy-to-use-youtube-player/> [accessed 11/19/2008]

<http://icant.co.uk/easy-youtube/?http://www.youtube.com/watch?v=vkdZmi85gkx> [accessed 11/19/2008]

<http://googleblog.blogspot.com/2007/02/web-apis-web-mashups-and-accessibility.html> [accessed 11/19/2008]

<sup>18</sup> <http://services.alphaworks.ibm.com/socialaccessibility/> [accessed 11/19/2008]

## 7) Maintain timetable for evaluation and revision<sup>19</sup>

Web Accessibility In Mind (WebAIM) points out that, while it is not without costs, accessible web design adds value. “Sometimes web developers fear that it is more expensive and time-consuming to create accessible web sites than it is to create inaccessible ones. This fear is largely untrue. The benefits of providing access to a larger population almost always outweigh the time required by a knowledgeable developer to implement that accessibility.”<sup>20</sup>

## Standards

### Electronic and Information Technology Accessibility Standards (Section 508)

- *Federal Register document (2000)*  
<http://www.access-board.gov/sec508/standards.htm>
- *Review of Section 508 Standards for Web Accessibility*  
<http://jimthatcher.com/webcoursec.htm>

### Web Content Accessibility Guidelines 1.0

- *W3C Recommendation (1999)*  
<http://www.w3.org/TR/WAI-WEBCONTENT/>
- *W3C Quick Tips to Make Accessible Web Sites*  
<http://www.w3.org/WAI/quicktips/Overview.php>

### Web Content Accessibility Guidelines 2.0

- *Web Accessibility Initiative (WAI)*  
<http://www.w3.org/WAI/>

### Comparisons of WCAG and Section 508

- *Side by Side WCAG vs. 508*  
<http://jimthatcher.com/sidebyside.htm>
- *Web Accessibility: IBM Web Accessibility Checklist, W3C Web Content Accessibility Guidelines (WCAG) and US Section 508*  
<http://www-03.ibm.com/able/guidelines/web/ibm508wcag.html>

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<sup>19</sup> <http://www.knowbility.org/main/> [accessed 11/19/2008]

<sup>20</sup> <http://www.webaim.org/intro/> [accessed 11/19/2008]

## State by State Summary of Web Accessibility Laws and Policies<sup>21</sup>

### Minnesota

In addition to Title II of the ADA and Section 508 of the Rehabilitation Act, two state laws require that people with disabilities shall have equal access to information provided by the State of Minnesota. The Minnesota Human Rights Act, 363A.12 PUBLIC SERVICES. Subdivision 1 specifies, “Access to public service. It is an unfair discriminatory practice to discriminate against any person in the access to, admission to, full utilization of or benefit from any public service because of race, color, creed, religion, national origin, disability, sex, sexual orientation, or status with regard to public assistance.”

<https://www.revisor.leg.state.mn.us/statutes/?id=363A.12>

Minnesota Statute 16C.145, states, “The commissioner shall develop nonvisual technology access standards. The standards must be included in all contracts for the procurement of information technology by, or for the use of, agencies, political subdivisions, and the Minnesota State Colleges and Universities” The standards must minimally include that effective, interactive control and use of the technology including the operating system, applications programs, prompts, and format of the data presented, are readily achievable by nonvisual means; that the nonvisual access technology must be compatible with information technology used by other individuals with whom the blind or visually impaired individual must interact; that nonvisual access technology must be integrated into networks used to share communications among employees, program participants, and the public; and that the nonvisual access technology must have the capability of providing equivalent access by nonvisual means to telecommunications or other interconnected network services used by persons who are not blind or visually impaired.

<https://www.revisor.leg.state.mn.us/statutes/?id=16C.145>

### California

“As directed by Executive Order D-17-00 issued on September 8, 2000, a comprehensive eGovernment initiative was launched that requires every agency and department to adhere to technical standards for accessible Web design and compatibility. The Accessibility Guide enables the State to utilize the best tools and design available to ensure that the content of the new California portal can be reached by the widest possible audience regardless of disability, limitations of computer equipment or use of alternate Internet access devices.

“In addition, State accessibility guidelines enable agencies to meet State and Federal statutory requirements prohibiting discrimination against people with disabilities in the design of both Internet and Intranet web sites. For example, California Government Code Section 11135 et seq. prohibits discrimination by entities receiving funding from the State of California.

“Likewise, Federal requirements mandating access for persons with disabilities were first imposed on State recipients of federal funding by the Rehabilitation Act of 1973. Today there are numerous Federal statutes and regulations extending civil rights protections to persons with disabilities, including the Americans with Disabilities Act of 1990 (ADA), as well as the 1998

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<sup>21</sup> This summary includes information for Minnesota’s NDIIPP grant project partners only.

Amendments to the Rehabilitation Act, where specific technical requirements for accessible web design have been published by the U.S. Access Board. This is important since Title II of the ADA recognizes the importance of communication and the necessity of the State of California to take appropriate steps to ensure that communications with persons with disabilities are as effective as communications with others.”

<http://www.hwcws.cahwnet.gov/includes/accessibility.asp>

### **Illinois**

“The Illinois Information Technology Accessibility Act (IITAA) requires Illinois agencies and universities to ensure that their web sites, systems, and other information technologies are accessible to people with disabilities. While the Americans with Disabilities Act and Section 504 of the Rehabilitation Act require the State to address accessibility in general, the IITAA requires the State to establish and follow specific, functional accessibility standards and to address accessibility proactively.”

<http://ilga.gov/legislation/publicacts/fulltext.asp?Name=095-0307>

“As required by the Act, the Department of Human Services worked with a broad range of experts and stakeholders to establish standards that are effective, practical, and aligned with existing federal and international standards.”

<http://www.dhs.state.il.us/IITAA/IITAAStandards.html>

### **Kansas**

“6.0 POLICY: 6.1 All Web-based information and services provided on Inter/Intra/Extranet sites by Kansas State government organizations shall be designed to be accessible pursuant to federal and state law. 7.0 PROCEDURES: 7.1 Web standards for accessibility are in various stages of development across the international Web community. These standards continue to evolve at a pace that mirrors the rapid rate of change in the Internet itself. In response, the State has developed the State of Kansas Web Content Accessibility Guidelines, available on the Internet at (<http://www.da.ks.gov/itec/WASPriorities011303.htm>) and (<http://www.da.ks.gov/itec/WASGuidance102600.htm>).”

<http://www.da.ks.gov/itec/WASPriorities011303.htm>

### **Mississippi**

“The State of Mississippi is committed to providing employees and the public, including individuals with disabilities, access to its web-based information and services. Mississippi.gov is designed for compliance with Priority One of the W3C Guidelines. In addition, Mississippi.gov is compliant with guidelines in Section 508 of the Rehabilitation Act that are not covered in W3C Priority One. Mississippi.gov is designed for view in most Internet browsers and browser versions in order to reach the widest audience possible. Mississippi.gov pages have been tested in popular screen readers to help assure accessibility.”

[http://www.mississippi.gov/access\\_policy.jsp](http://www.mississippi.gov/access_policy.jsp)

## **Tennessee**

“The U.S. Department of Justice issued an opinion in September 1996 stating that the American with Disabilities Act (ADA) Titles II and III require entities under the ADA to provide effective communication, regardless of the media used. Covered entities that use the Internet for communications regarding their programs, goods, or services must be prepared to offer those communications via an accessible medium. The guidelines for Tennessee’s accessibility initiative are the same as those for federal agencies. Section 508 of the Federal Register establishes requirements for electronic and information technology, and the federal Access Board has issued the standards to meet those requirements.”

<http://www.tennesseeanytime.org/tnanytime/accessibility/standards.html>

## **Vermont**

“Vermont.gov has adopted Section 508 and W3C Web Accessibility Initiative standards and guidelines as the benchmark to meet the objectives of the Universal Accessibility for State Web sites policy.”

<http://vermont.gov/portal/policies/accessibility.php>

## **Comparison of Standards in All States**

Table comparing state standards assembled by Hewlett-Packard

[http://www.hp.com/hpinfo/abouthp/accessibility/State\\_Web\\_Accessibility.pdf](http://www.hp.com/hpinfo/abouthp/accessibility/State_Web_Accessibility.pdf)

The Georgia Tech Research Institute database of state standards:

[http://accessibility.gtri.gatech.edu/sitid/state\\_prototype.php](http://accessibility.gtri.gatech.edu/sitid/state_prototype.php)

<http://accessibility.gtri.gatech.edu/sitid/stateLawAtGlance.php>

(This site has not been updated since February 2006).

## For More Information

### **American Bar Association: FYI: Web Accessibility**

Web accessibility resources from the American Bar Association, Legal Technology Resource Center.

<http://www.abanet.org/tech/ltrc/fyidocs/webaccessibility.html>

### **Colorblind Web Page Filter**

A tool for designing web sites for colorblind users.

<http://colorfilter.wickline.org/>

### **Georgia Tech Research Institute: State E and IT Accessibility Initiatives**

Georgia Tech Research Institute, Human Systems Engineering Branch of the Electronic Systems Lab. Information on a variety of design issues and links for additional assistance. It includes a database that lists accessibility requirements for all fifty states, but does not reflect changes made since 2006.

[http://accessibility.gtri.gatech.edu/sitid/state\\_prototype.php](http://accessibility.gtri.gatech.edu/sitid/state_prototype.php)

### **Google Webmaster Central Blog**

Google webmaster blog posts on accessibility highlighting how it improves indexing and overall usability.

<http://googlewebmastercentral.blogspot.com/search/label/accessibility>

### **IMS Global Learning Consortium: Accessibility (AccessForAll Meta-data Specification)**

“The IMS Global Learning Consortium creates standards for the development and adoption of technologies that enable high-quality, accessible, and affordable learning experiences.”

<http://www.imsglobal.org/accessibility/>

### **JimThatcher.com**

Accessibility consultant with links to laws, standards, tutorials, and other resources

<http://jimthatcher.com/>

### **NASCIO Minority Report**

April 2008 NASCIO (National Association of State Chief Information Officers) comments on proposed revisions to Section 508.

<http://www.access-board.gov/sec508/refresh/report/nascio.htm>

### **NYS Forum IT Accessibility Committee, “Validation Tool Improves Web Accessibility for NYS Citizens.”**

Paper submitted to the National Association of State Chief Information Officers describing a validation tool used by the State of New York to improve accessibility to web pages.

<http://www.nascio.org/awards/nominations2008/2008/2008NY5-ValidationToolNYSnomination.pdf>

**Paul T. Jaeger, “Multi-Method Evaluation of U.S. Federal Electronic Government Websites in Terms of Accessibility for Persons with Disabilities.”**

Florida State University, 2006 Dissertation on Web Accessibility.

<http://etd.lib.fsu.edu/theses/available/etd-03062006-120905/unrestricted/PTJaegerDissertationFinal.pdf>

**Ronald E. Milliman, “Public Policy Impact on Internet Accessibility for Persons with Disabilities: The Effects of the Federal Regulation Section 508 of the Workforce Investment Act on Non-Governmental Entities.”**

A 2001 study on why sites are not compliant.

<http://www.in-the-works.com/wkgpprs/milliman032544.html>

**Section 508**

Home page for information related to Section 508 standards

<http://www.section508.gov/>

**University of Washington: Tools and Resources**

The University of Washington provides a list of tools and resources that support accessible development, primarily of web and multimedia content and applications.

<http://www.washington.edu/accessibility/tools.html>

**Web Accessibility in Mind (WebAIM)**

WebAIM is an initiative of: Center for Persons with Disabilities, Utah State University. In addition to detailed accessibility guides articles and a blog, WebAIM offers educational and consulting services.

<http://www.webaim.org/>

**WebAnywhere**

Provides screen reader access anywhere for blind internet users.

<http://webanywhere.cs.washington.edu/>