

## Accessibility White Paper

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## **Introduction**

Recognizing the increasing centrality of electronically-based information in our lives, we must ensure that each member of our society has sufficient access to these resources. Phenomena such as the digital divide let us know that this is not the case, but the digital divide is not the only problem with which we should be concerned. Web accessibility is another subject that has come under increasing scrutiny on a worldwide scale, and is an issue to which information professionals should pay close attention. This white paper cites the core elements of accessibility as understood by the World Wide Web Consortium's Web Accessibility Initiative, the source of several widely adopted accessibility standards. The W3C's international, collaborative nature make it a worthy representation of efforts being undertaken to make the Web's wealth of information available to all people.

## **Understanding Web accessibility**

According to the World Wide Web Consortium's Web Accessibility Initiative (2005), Web accessibility means that "people with disabilities can perceive, understand, navigate, and interact with the Web, and that they can contribute to the Web" ("Introduction to Web accessibility," para. 1). As it relates to the Web, the WAI defines disability broadly as "all disabilities that affect access to the Web, including visual auditory, physical, speech, cognitive, and neurological disabilities" (2005, para. 2).

While the focus of Web accessibility is on fulfilling the needs of disabled individuals, it is important to note that the principles of Web accessibility can benefit all users of the World Wide Web. The Web Accessibility Initiative cites people with dial-up Internet connections, as well as elderly individuals who experience decreased dexterity due to advanced age, as examples of those who can also benefit from accessible Web design (2005, para. 4).

## **Web accessibility matters**

As information professionals, we should be concerned with each individual's ability to retrieve, use, and understand information quickly and efficiently. Since the Web is one of the principal tools people use to find the information they need, we should also care about obstacles encountered by people in their search for information on the Web. While issues such as information overload are becoming increasingly pressing, where Web accessibility is concerned we should be focused on the ideals of equal access and equal opportunity for all Web users (2005, para. 5). When a Web site is inaccessible to a person with a disability, the individual's right to access that information effectively is denied. If information is the new form of capital in our society, then the problem of inaccessibility creates a troubling disparity between information "haves" and "have nots." As gatekeepers to the world of information, we should be aware of this imbalance and take steps to ensure that it is righted. Accessible Web design is one concrete step that can be taken on the path to equal opportunity and equal access to information.

## **Guidelines for creating accessible Web sites**

A variety of resources exist to help Web developers create accessible sites. Among the most important of these are a series of guidelines produced by the W3C's Web Accessibility Initiative. The Web Content Accessibility Guidelines (WCAG),

created in 1999, provide rules and advice about making the information contained within a site, such as the text, images, audio, etc., accessible (“WCAG overview,” 2007). As mentioned above, the WAI released WCAG 1.0 in 1999; currently, Version 2.0 is in “Last Call Working Draft” form, but its contents are readily available for review and implementation on the W3C Web site (see the attached resources section).

A second set of guidelines concern the software used to design Web sites. The Authoring Tool Accessibility Guidelines (ATAG) provide a resource for software developers who actually create the programs, such as Dreamweaver, used to design Web sites (“ATAG overview,” 2007). The guidelines tell developers how their tools should allow users of their software to create accessible designs that conform to the WCAG. Significantly, the ATAG also include information about how to make authoring tools accessible to people with disabilities. Like the WCAG, the Authoring Tool Accessibility Guidelines exist in two versions: ATAG 1.0, approved in 2000, and ATAG 2.0 (still in development).

A third series of guidelines pertain to the technologies people use to access the Web. The User Agent Accessibility Guidelines document how to make technology such as Web browsers and media players accessible to those with disabilities (“UAAG overview,” 2005). Significantly, these guidelines also cover how to develop accessible assistive technologies. Assistive technologies are those that allow people with disabilities to interact with computers more efficiently and effectively. UAAG 1.0 was finalized in 2002; a 2.0 version of these guidelines has not been developed.

### **Evaluate your Web site for accessibility**

The WAI suggests that “evaluating accessibility early and throughout the development process can identify accessibility problems early when it is easier to address them” (“Introduction to Web accessibility,” 2005, para. 15). Accordingly, many tools have been created—by universities, private companies, and non-profits—to evaluate different aspects of Web accessibility. An extensive list of these tools is available on the WAI Web site (“Web accessibility evaluation tools: overview,” 2006).

### **Learn more about Web accessibility**

The sections above provide a brief overview of the basics of Web accessibility; this is by no means an exhaustive report. Accordingly, the resources listed on the following pages serve as a point of entry into the vast body of wisdom concerning Web accessibility that has accumulated over the last two decades.

## Sources cited

W3C Web Accessibility Initiative. (2005). *Introduction to Web accessibility*. Retrieved October 13, 2007, from <http://www.w3.org/WAI/intro/accessibility.php>.

W3C Web Accessibility Initiative. (2005). *User Agent Accessibility Guidelines (UAAG) overview*. Retrieved October 13, 2007, from <http://www.w3.org/WAI/intro/uaag.php>.

W3C Web Accessibility Initiative. (2006). *Web accessibility evaluation tools: overview*. Retrieved October 13, 2007, from <http://www.w3.org/WAI/ER/tools/>.

W3C Web Accessibility Initiative. (2007). *Authoring Tool Accessibility Guidelines (ATAG) overview*. Retrieved October 13, 2007, from <http://www.w3.org/WAI/intro/atag.php>.

W3C Web Accessibility Initiative. (2007). *Web Content Accessibility Guidelines (WCAG) overview*. Retrieved October 13, 2007, from <http://www.w3.org/WAI/intro/wcag.php>.

**For further investigation:**

**General Web accessibility resources**

Accessibility 101 (British site)

<http://www.accessibility101.org.uk/>

Accessible Web page design: resources

[http://library.uwsp.edu/aschmetz/accessible/pub\\_resources.htm](http://library.uwsp.edu/aschmetz/accessible/pub_resources.htm)

Revealweb Catalogue of Resources (UK)

<http://www.revealweb.org.uk/catalogue.htm#content>

W3C

<http://www.w3.org>

W3C Web Accessibility Initiative

<http://www.w3.org/WAI>

Web AIM (Accessibility in Mind)

<http://www.webaim.org>

**Governmental efforts to address accessibility**

Common Look and Feel Standards for the Internet (Canada)

[http://www.tbs-sct.gc.ca/clf-nsi/index\\_e.asp](http://www.tbs-sct.gc.ca/clf-nsi/index_e.asp)

Government of Canada Internet guide

[http://www.tbs-sct.gc.ca/ig-gi/index\\_e.asp](http://www.tbs-sct.gc.ca/ig-gi/index_e.asp)

PAS 78 (Great Britain)

[http://83.137.212.42/sitearchive/DRC/library/website\\_accessibility\\_guidance/pas\\_78.html](http://83.137.212.42/sitearchive/DRC/library/website_accessibility_guidance/pas_78.html)

Section 508 (United States)

<http://www.section508.gov>

**Organizations concerned with accessibility**

Equal Access to Software and Information

<http://www.rit.edu/~easi>

National Center on Accessible Information Technology in Education

<http://www.washington.edu/accessit>

National Center on Disability and Access to Education  
<http://ncdae.org>

### **Making your Web site accessible**

Accessites.org – The art of accessibility  
<http://accessites.org>

Dive Into Accessibility  
<http://www.diveintoaccessibility.org>

Implementation plan for Web accessibility  
<http://www.w3.org/WAI/impl/>

Quick tips to make accessible Web sites  
<http://www.w3.org/WAI/quicktips>

UAAG 1.0  
<http://www.w3.org/TR/UAAG10/>

Viewable With Any Browser  
<http://www.anybrowser.org/campaign/abdesign.shtml>

W3C Markup Validator  
<http://validator.w3.org>

WCAG 1.0  
<http://www.w3.org/TR/WCAG10/>

WCAG 2.0 (working draft)  
<http://www.w3.org/TR/WCAG20/>

WCAG Samurai (Corrections for, and extensions to WCAG 1.0)  
<http://wcagsamurai.org>

Web Page backward compatibility viewer  
<http://www.delorie.com/web/wpbcv.html>

### **Web authoring tools**

ATAG 1.0  
<http://www.w3.org/TR/ATAG10/>

ATAG 2.0 (working draft)

<http://www.w3.org/TR/ATAG20/>

Selecting and using authoring tools for Web accessibility

<http://www.w3.org/WAI/impl/software>

### **Assistive technologies**

Assistivetech.net assistive technology wiki

[http://atwiki.assistivetech.net/ATWiki\\_Home](http://atwiki.assistivetech.net/ATWiki_Home)

Georgia Tech Center for Assistive Technology and Environmental Access

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

National Public Web Site On Assistive Technology

<http://www.assistivetech.net/about/index.php>

Section 508: Assistive technology devices

<http://www.section508.gov/index.cfm?FuseAction=Content&ID=87>

WheelchairNet (More AT devices)

[http://www.wheelchairnet.org/WCN\\_ProdServ/Products/OtherATprod.html](http://www.wheelchairnet.org/WCN_ProdServ/Products/OtherATprod.html)

### **Evaluating Web sites for accessibility**

Web accessibility evaluation tools

<http://www.w3.org/WAI/ER/tools/complete>

Testing for Accessibility

<http://www.jimthatcher.com/testing.htm>

### **Accessibility statements**

Glaucoma Research Foundation

[http://www.glaucoma.org/about/accessibility\\_s.php](http://www.glaucoma.org/about/accessibility_s.php)

Princeton University Academic Services

<http://www.princeton.edu/as/accessibility.shtml>

Sainsbury's Bank

[http://www.sainsburysbank.co.uk/savings/info\\_accessibility.shtml](http://www.sainsburysbank.co.uk/savings/info_accessibility.shtml)

State of Delaware

<http://delaware.gov/egov/portal.nsf/portal/access>

USDA Food and Nutrition Service

[http://www.fns.usda.gov/fns/web\\_accessibility.htm](http://www.fns.usda.gov/fns/web_accessibility.htm)

Writing a good accessibility statement

<http://juicystudio.com/article/writing-a-good-accessibility-statement.php>

### **Keeping up with accessibility issues**

Accessify (online forum on accessibility issues)

<http://www.accessifyforum.com>

AWARE (Accessible Web Authoring Resources & Education)

<http://aware.hwg.org>

WAI Magazine

<http://wai.phpmagazine.net>

### **Further reading**

Brewer, J. (Ed.). (2005). *How people with disabilities use the Web*. Retrieved October 12, 2007, from <http://www.w3.org/WAI/EO/Drafts/PWD-Use-Web/>.

Carey, K. (2005). Accessibility: the current situation and new directions. *Ariadne*, Issue 44. Retrieved October 9, 2007, from <http://www.ariadne.ac.uk/issue44/carey/>.

Craven, J., & Snarud, M. (2005). Involving users in the development of a Web accessibility tool. *Ariadne*, Issue 44. Retrieved October 9, 2007, from <http://www.ariadne.ac.uk/issue44/craven/>.

Foley, A., & Regan, B. (2002). Web design for accessibility: policies and practice. *ACE Journal*, 10(1), 62-80. Retrieved October 12, 2007, from [http://www.editlib.org/index.cfm?fuseaction=Reader.ViewAbstract&paper\\_id=17779](http://www.editlib.org/index.cfm?fuseaction=Reader.ViewAbstract&paper_id=17779).

Foster, A. (2001). Colleges focus on making web sites work for people with disabilities. *Chronicle of Higher Education*. Retrieved October 12, 2007, from <http://chronicle.com/free/2001/01/2001012601t.htm>.

Golub, K. (2002). Digital libraries and the blind and visually impaired. In *Proceedings 4th CARNET Users Conference - CUC, Zagreb (Croatia)*. Retrieved October 12, 2007, from <http://eprints.rclis.org/archive/00000702/>.

- Harrison, L., & O'Grady, L. (2003). Web accessibility validation and repair: which tool and why? *Library Hi Tech*, (21)4, 463-70. Retrieved October 12, 2007, from Library and Information Science Abstracts database.
- Jackson-Sanborn, E., Odess-Harnish, K., & Warren, N. (2002). Web site accessibility: a study of six genres. *Library Hi Tech*, (20)3, 308-17. Retrieved October 12, 2007, from Library and Information Science Abstracts database.
- NISO Framework Advisory Group. (2004). *A framework of guidance for building good digital collections, 2<sup>nd</sup> Ed.* Retrieved October 12, 2007, from <http://www.niso.org/framework/framework2.html>.
- Snaprud, M., and Sawicka, A. (2006). *The European Internet Accessibility Observatory Project.* Retrieved October 16, 2007, from <http://unpan1.un.org/intradoc/groups/public/documents/UN/UNPAN023676.pdf>.
- Stewart, R., Narenda, V., & Schmetzke, A. (2005). Accessibility and usability of online library databases. *Library Hi Tech*, (23)2, 265-86. Retrieved October 12, 2007, from Library and Information Science Abstracts database.
- Weisen, M., Petrie, H., King, N., & Hamilton, F. (2005). Web accessibility revealed: The Museums, Libraries and Archives Council audit. *Ariadne*, Issue 44. Retrieved October 9, 2007, from <http://www.ariadne.ac.uk/issue44/petrie-weisen/>.