Why Web Accessibility Matters for Cultural Institutions:

Overview of Legal Requirements, Typical Problems, Practical Guidelines and Examples of Website Redesign

A Project Access White Paper
Art Beyond Sight

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PROJECT ACCESS

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Abstract

Access to the Internet for people with disabilities is an issue that has broad implications for cultural institutions. Questions of arts inclusion, community outreach, and broad-based educational efforts can often be addressed with technology, particularly the World Wide Web. If Web-based communications are not designed with accessibility in mind, however, significant numbers of people may be left out and experience additional barriers to participation in arts and cultural activities. This paper walks through Web accessibility issues, examines existing guidelines to meet the accessibility needs of all, and provides data on the results of Web accessibility reviews of a number of cultural institutions.

Issues in Web accessibility for cultural institutions

Design flaws in most Websites, including those of cultural institutions, inadvertently lock many people out.

Cultural institutions have a particular commitment to and responsibility for inclusion. The idea that the arts and culture enrich the lives of all people is one that is woven deeply into cultural traditions. While it is often difficult to objectively and rationally evaluate the impact of the arts on the lives of people with disabilities through common evaluative methods, various studies offer powerful personal stories of transformation through the arts. The idea of cultural inclusion has in fact become so widely accepted that civil rights law, including the Americans with Disabilities Act (ADA), is often used as an advocacy tool by those seeking equal access to cultural experiences.

Art and cultural exchanges are no longer confined to physical spaces. In addition to enjoying programs and exhibits offered at museums, symphony halls, theaters, or community arts centers, many people are increasingly able to experience art and cultural events online as well. While online access to cultural experience is possible for most able-bodied people who use the Internet, there are design barriers that continue to prevent a large and growing group from sharing those experiences. For example, graphic illustrations of a painting, perhaps, or a piece of sculpture from a current museum exhibit can be made accessible to blind Website visitors if text alternatives are included in the code. Users with mobility impairments require that Website functions, such as buttons and form inputs, can be activated using only keyboard commands. Deaf visitors are not able to hear video content, but can have equal access to the information if videos are captioned. People with cognitive disabilities, color blindness, and low vision may need software and adaptive strategies that can be accommodated in the Web design process.

Design flaws in most Websites, including those of cultural institutions, inadvertently lock many people out. As a result, people with disabilities are often unable to participate in online cultural experiences. This happens because developers neglect to use globally accepted Web-design standards that ensure usability by assistive technologies that are commonly used by people with disabilities to browse the

Web. In addition to being blocked from direct programming on the Web, such as video content and interactive cultural experiences, people with disabilities may be excluded from access to basic information and function, such as venue locations, event schedules, and ticket sales.

Solutions: Good design IS accessible design

Fortunately there is growing understanding of both the need to include everyone in Web-based cultural experience and the methods for such inclusion. Exclusionary practices are expressly addressed in the 2006 United Nations Convention on the Rights of Persons with Disabilities. Article 30 of that document recognizes the right of all people to "enjoy access to cultural materials in accessible formats." (The emphasis is mine.) Legal mandates, market value, and the emergence of global Web standards are the three major factors that drive the acceptance of Web accessibility as a fundamental principle of modern Web site creation. As often noted by the late Dr. John Slatin, an early advocate for Web accessibility, "Good design IS accessible design." Let's look briefly at each of the three factors.

Legal mandates

The combination of legislation, litigation, and structured negotiation has made the legal risk of inaccessible Websites very real.

Numerous countries have passed laws to ensure equal opportunity for people with disabilities. In the United States, the struggle for equal access was patterned after the African American civil rights movement and the women's movement. Advocates believed that only by securing their rights in law would people with disabilities gain the right to "boldly go where everyone else has gone before." Access to public physical space was codified with the passage of the ADA in 1990 and is almost taken for granted today. The Web, however, was not used in the same way when the ADA was passed. In 1998, the United States Congress amended Section 508 of the Rehabilitation Act to explicitly define Web accessibility standards (based on the global standards discussed below). Section 508 set sixteen rules for Web accessibility, but the law applied only to United States government Web sites. With no mention of the Web in the ADA and a Web accessibility law that applied only to the federal government, the courts ruled inconsistently when advocates tried to sue for access to Web-based information and experience.

The first major victory for disability advocates came in 2006 when the courts ruled decisively that the retail store Target was discriminating against blind customers by maintaining an inaccessible Website. That ruling was based not on ADA or Section 508, but on civil rights nondiscrimination law. Target was made to pay more than $6 million in fines and its Web development process was overseen by court monitors. That ruling sounded a cautionary note to retailers and was followed by action against Amazon, Priceline, and other online commercial entities. As Web-based activities become more ubiquitous in society, it is increasingly difficult to justify the exclusion of people with disabilities.

In 2010, Congress passed and the President signed the Twenty-First Century Communications and Video Accessibility Act, a part of which requires captioning for all video broadcast on the Web. The Department of Justice has announced its intention to consider a more explicit way to extend the protection of the ADA to the Web. The combination of legislation, litigation, and structured negotiation has made the legal risk of inaccessible Websites very real. Successful legal action against

performing arts spaces, museums, online ticket sellers, Major League Baseball, and many others has encouraged organizations to rethink their accessibility strategy. Many organizations however, still weigh the legal risks and associated fines against the assumed complexity and expense of redesign, and choose to sit tight and take their chances.

Market forces

People with disabilities want what everyone else wants – opportunities to learn, to work, and to enjoy social and cultural experiences with their family and friends. The numbers of people with disabilities is growing. Disability is age-related and as the global population ages, more people acquire disabilities and may use assistive technologies to see, to hear, to move around – and to browse the Internet. There are more than 55 million people with disabilities in the United States, more than 750 million worldwide. A study in 2006 by Forbes Magazine concluded that people with disabilities in the United States spend more than $1 tillion each year and that $200 billion of that is discretionary spending. The buying power of the aging baby boomers is tremendous and businesses have begun to pay attention to that market. To ensure that older consumers can find and use information on a Website, accessible design becomes an important consideration.

Web standards

One of the earliest and most important tasks for WAI was the creation of Web accessibility guidelines.

The World Wide Web Consortium (W3C) is the standards-making body for the Web. The W3C gathers input using a consensus process to create, mediate, publish, and maintain the various programming languages and protocols that allow the Internet to operate as it does. In 1997, the W3C launched the Web Accessibility Initiative (WAI) with the purpose of ensuring that the Web was available to everyone. "The power of the Web is in its universality," said Tim Berners-Lee, one of the originators of the World Wide Web. "Access by everyone regardless of disability is an essential aspect." WAI created several working groups to address specific topics of Web accessibility. One of the earliest and most important tasks for WAI was the creation of Web accessibility guidelines. The Web Content Accessibility Guidelines Working Group (WCAG WG) was formed with global representation from industry, governments, academia, and the community of people with disabilities. The working group published the Web Content Accessibility Guidelines 1.0 (WCAG 1.0) as W3C Recommendation in 1999, followed by techniques documents in 2000. In 2001, the working group started work on WCAG 2.0, which became a W3C Recommendation on 11 December 2008.

WCAG is the Web-content accessibility design standard throughout the world. Other working groups create guidelines for Authoring Tools (ATAG WG) and User Agents (UAAG WG). Government and corporate policy makers have either adapted WAI guidelines or adopted them entirely as their own standard. In the United States, the Section 508 standard mentioned earlier was adapted from WCAG1. The newly revised recommendations for the Section 508 Refresh are adapted from WCAG2. ATAG and UAAG are also being updated to reflect evolving technology and design techniques. These interdependent standards provide a stable foundation and create common understanding among content creators, browser makers, assistive technologies, authoring tools, and other hardware and software devices that create and render

Web content. They not only provide high-level guidance; WCAG is supported by specific design and development techniques and testing protocols that allow Web developers to know how to meet the requirements and how to validate that they have been successful.

WCAG 2.0 is comprised of twelve guidelines that are organized under four principles of user experience. Web content must be perceivable, operable, understandable, and robust for all users and a wide array of devices. Each guideline has testable success criteria, which are at three levels: A, AA, and AAA. The principles and associated guidelines are summarized below. For greater detail, visit the Web Accessibility Initiative of the W3C.

1. Perceivable
- Provide text alternatives for non-text content.
- Provide captions and other alternatives for multimedia.
- Create content that can be presented in different ways, including by assistive technologies, without losing meaning.
- Make it easier for users to see and hear content.

2. Operable
- Make all functionality available from a keyboard.
- Give users enough time to read and use content.
- Do not use content that causes seizures.
- Help users navigate and find content.

3. Understandable
- Make text readable and understandable.
- Make content appear and operate in predictable ways.
- Help users avoid and correct mistakes.

4. Robust
- Maximize compatibility with current and future user tools.

As the Web has become more complex, with greater numbers and types of devices that access and render content, standards have become increasingly respected. Standards compliant use of HTML< Cascading Style Sheets, Javascript, and other common Web languages and protocols allows for interoperability and improved performance on many levels. In addition to providing assistive technology access, the proper use of Web standards has been shown to increase interoperability for mobile devices and to improve search engine ratings. Increasingly, an understanding of Web standards is a requirement for Web professionals.

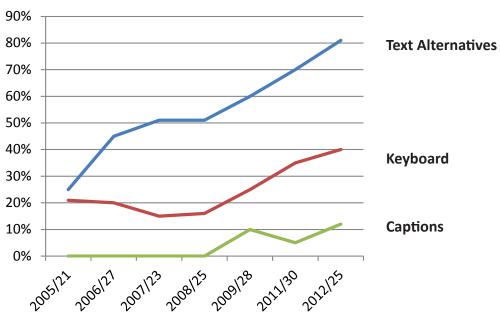## Implications for cultural institutions

The Kennedy Center for the Performing Arts produces an annual conference for ADA Coordinators of Cultural Institutions. Called the Leadership Exchange in Arts and Disability (LEAD), the conference identifies best practices for cultural inclusion and shares them among the community. Among the more than 200 attendees are representatives from community arts organizations, university arts programs, and cultural institutions like the Smithsonian and Boston's Museum of Fine Arts. Most of the sessions at LEAD have to do with the provision of accessibility to physical space and live performances. Since 2002, however, LEAD has included considerations of Web design.

Organizers provide attendees with an option to receive fifteen-minute "Web consults" in which Web accessibility experts assess a member's Web pages for compliance with Web design standards. Between 20 and 45 sites are manually reviewed each year and the reports are superficial rather than comprehensive. Reviewers used WCAG1 until 2008 when they began using WCAG2. All twelve guidelines were considered, and attendees were given reports on how well the site met the WCAG standard with overall compliance reported as a percentage. The table below refers to just three very basic practices and presents the aggregated results on those three items. These are fundamental practices that indicate increased awareness of the need for Web accessibility over time. Data for these selected basic benchmarks indicate a growing understanding and application of accessible Web-design practice among cultural institutions attending the LEAD conference.

Below: Percentage of LEAD sites that successfully met accessibility requirements for text alternatives, captions, and Keyboard operability from 2002 through 2012

YEAR/ NUMBER OF SITES REVIEWED	2002 /12	2003 /20	2004 /16	2005 /21	2006 /27	2007 /23	2008 /25	2009 /45	2010	2011 /30	2013 /25
TEXT ALTERNATIVES FOR IMAGES	16%	14%	20%	27%	41%	52%	49%	60%	No data	74%	82%
KEYBOARD OPERABILITY	8 %	15%	20%	21%	20%	15%	16%	25%	No data	33%	40%
CAPTIONS FOR VIDEO	NA	0	NA	0	0	0	0	10%	No data	6%	12%

Below: Web assessment data from the table above are graphed showing an upward trajectory over time for all three indicators of compliance to Web accessibility standards

While this sample size is quite small, it is indicative of how Web accessibility is becoming integrated into modern sophisticated communications strategies that include Web and mobile design considerations.

Different organizations attend and take advantage of the option to have their Web sites reviewed each year at LEAD. There are two organizations however that have returned each year and which make an interesting case study. These organizations' ADA coordinators who attend, while not being the Web development lead of their organizations, have taken the data back to their information technology (IT) departments and advocated for change. One is a performing arts organization associated with a large university. The other is a major metropolitan area fine arts museum. The different outcomes they have had are instructive.

The representative from the museum took the finding to the museum leadership and administration. The performing arts organization representative had no access to the university leadership and spoke only to the IT department. Change at the performing arts organization has been minimal. The LEAD attendee is met with resistance and lack of cooperation. He has been told that "we are not subject to those laws" and so there have been few improvements and the scores through the years remain in the lower 30th percentile.

An accessibility champion at the decision-making level is invaluable.

The museum site had much the same experience for the first few years. Eventually, however, the ADA coordinator was able to secure the attention of administrative leaders. Since then, the museum has found ways to align Web accessibility with its core values of inclusion and community service. A policy group was convened to learn more and to make recommendations for meeting the challenge of providing Web-based information in ways that are accessible to the widest numbers of patrons. In the past several years, the museum has implemented the following steps:

1. Secured executive leadership. An accessibility champion at the decision-making level is invaluable.

2. Developed an explicit Web-accessibility commitment, reflected in museum policy. Web accessibility policy and commitment statements are published and are maintained and re-evaluated periodically.

3. Reflected the commitment to accessibility in budgeting, planning, and investment.

4. Tied its commitment to IT purchasing. As software purchases are considered, for authoring tools, ticketing applications, or content management systems, they are evaluated for conformance to Web-accessibility standards. Language was developed for IT RFPs that required vendors to report on how well their products meet accessibility standards.

5. Integrated Web-accessibility considerations into the development cycle. The museum contracted for a more thorough Web-accessibility audit and identified parts of its site that failed accessibility requirements. Failures were categorized as Critical, Serious, Moderate, or Minor. As sections of the Website are being considered for redesign, accessibility is built into the considerations.

6. Testing for accessibility and including people with disabilities in user testing.

7. Supported its commitment with on-staff Web developer training and resources. Not only are Web staff trained in principles of accessible design, but all staff that post to the Web must undergo basic IT accessibility instruction. The museum maintains guidelines for the creation of accessible documents as well as Web pages.

The practical value of the steps taken by the museum leadership was that these were not new processes. Considerations of accessibility were built into existing processes and protocols. People were assigned tasks closely aligned to their existing roles and so did not feel overwhelmed.

It would be a mistake however, to assume that these policies have led to a perfect score or a fully accessible Website. For example, museum staff still struggles with third-party products, rapidly evolving technology, and consumer expectations. Having language in an RFP does not mean that they always find products that meet the need or that procurement staff know how to validate accessibility status. Raising awareness of accessible content creation techniques does not necessarily mean that all documents meet standards, since there is no enforcement mechanism in place. Current trends for online video content have brought new challenges for ensuring accessibility. Nevertheless, the annual review scores for this organization have gone from 28% successful to 71% since 2008.

Conclusion

Technology provides an unprecedented opportunity to include people with disabilities in cultural events. A group of people who have been marginalized throughout human history can now contribute to the cultural conversation and fully participate as producers and consumers in interactive cultural exchanges. Accessibility is the key. Communities of practice within local, regional, and global arts initiatives can be transformed using principles of universal design and adhering to community standards of inclusion. Whether an organization is large or small, community based or institutional, with professional IT department or dependent on volunteers, there is a place for Web accessibility in your planning and implementation strategies. Cultural institutions are challenged to be more inclusive and there is legal, market, and technical reasons to meet the challenges of Web accessibility. The most important reason however is the human rights aspect. Every person, regardless of disability, has a richer life when they have access to a wide array of cultural experience. In the modern world, the Web is part of that becomes possible. For more information on all aspects of Web accessibility, there is no better place to start than the Web Accessibility Initiative at the W3C. In addition, the Education and Outreach Working Group at WAI has developed tutorials and guides to help users take advantage of the great free resources provided.