The Invisible Web

Why Your Constituents Can't Use Your City Website

A Survey Of Municipal Web Accessibility
May 2004

Conducted by Alt Tags
www.AltTags.org

Introduction

Ninety-one percent of California's municipalities have inaccessible websites. In an era of shrinking budgets, cities fail to maximize an effective cost saving tool -- the Internet -- by providing services for all constituents. Groups excluded from government websites include disabled persons, senior citizens, and individuals using emerging technologies such as cell phones.

In the first quarter of 2004, AltTags.org tested 408 municipal websites, and discovered only 9% were in compliance with the Section 508 of the Rehabilitation Act guidelines for website accessibility. While Section 508 is a Federal requirement, local government often adopts voluntary compliance in order to better serve constituents.

The table below summarizes the results of the automated testing. The number of errors indicates the number of guidelines not met by the tested websites. With rare exceptions, each failure represents multiple violations of a particular guideline. In the next section, we discuss the most common errors encountered.

The table below summarizes failures found on agency home pages. Testing applied to entire websites revealed significantly higher levels of guideline violations, even among those cities whose home pages were Section 508 compliant.

Section 508 Guideline Failures	Number of Cities	Percentage
0	35	9%
1 - 3	336	82%
4 or more	37	9%

Alt Tags also tested for compliance with the World Wide Web Consortium's Web Content Accessibility Guidelines 1.0 (WCAG). WCAG, one component of the W3C's Web Accessibility Initiative[1], sets three levels of compliance. Priority One compliance means a website is generally accessible. Some users will have difficulty accessing certain information, but the site will be usable by a wide range of people with disabilities.

Priority Three sites meet both Priorities One and Two while incorporating additional measures to achieve the highest possible level of accessibility. 89% of the sites tested failed to achieve Priority One compliance.

WCAG Priority Level Reached	Number of Cities	Percentage
Failed	364	89%
Priority 1	42	10%
Priority 2	2	0%
Priority 3	0	0%

Over 55 million Americans have some sort of disability – and the number is rising, in part due to our aging population. Worldwide, the number of disabled persons exceeds 750 million. Again, the number is rising.

These are your constituents – and chances are they can't use your website.

In the simplest terms, accessibility means making your website usable by as many people as possible. While the focus of accessibility guidelines is improving access for disabled person, we'll see that an accessible website benefits all users. Accessibility is good business.

This report is intended to be an overview of the various issues surrounding web accessibility. Creating an accessible website requires familiarity with current web standards and technology. This may require training for your in-house staff, investing in tools or infrastructure, or hiring an accessibility consultant to offer guidance. If you're retrofitting your site to make it accessible, a clear workplan needs to be developed –

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[1] The W3C's Web Accessibility Initiative (http://www.w3.org/WAI/) pursues accessibility of the Web through five primary areas of work: technology, guidelines, tools, education and outreach, and research and development.

if you're developing a new site, an accessibility policy should be established before the design phase begins.

The Most Common Problems

Unlike the lengthy and detailed WCAG checkpoints, the Section 508 guidelines contain only 16 points, providing a roadmap for building websites that are accessible to users with a wide range of disabilities. Following the guidelines provides the added benefit of creating a more usable website for all users.

Through the use of inadequate tools and the lack of understanding of the underlying complexity of building websites, many city sites remain inaccessible despite a general desire to achieve Section 508 compliance. Frequently, a city will launch a site that has achieved compliance, only to fall out of compliance soon thereafter due to lack of understanding of the guidelines. Web accessibility is an ongoing process, not a one-time effort. As a result, accessibility requires commitment and awareness of the factors that create barriers to access.

While we encountered a wide range of guideline failures, the vast majority fell into a narrow range of categories:

❖ **Lack of alternative text for graphic images**

Missing text alternatives for graphic images creates problems for customers who are blind, have visual impairments (for example, low vision), use cell phones, PDAs, or other text-based browsers, or turn off graphics due to slow dial-up connections. Alternative text also provides "caption" information for users; this functionality enhances graphics on a website. Because of the importance of alternative text to multiple web audiences, it is the number one requirement on both the Section 508 guidelines and WCAG.

During our testing, we encountered many instances of agencies using graphics-based navigation without providing any sort of text alternative. In addition to creating myriad accessibility problems, graphic navigation is also the most expensive to maintain. Text-based or automatically generated navigation allows local government to quickly add section to a website; a graphics-based system requires the input of a designer and/or a programmer to implement and maintain.

❖ **No options for enlarging small, hard-to-read text**

For many users, small, hard-to-read text on websites is a concern. Senior citizens, individuals with vision problems, those with cognitive difficulties or dyslexia, even people who have been staring at their monitors all day benefit from text that can be easily resized to be readable. While users can activate built-in browser tools or use screen magnifiers to increased font size, the result is often more difficult to read due to poor page design.

❖ **Device-dependent navigation**

While the vast majority of Internet users navigate websites using a mouse, there are many people who cannot. Users with mobility problems (including transient disabilities such as broken arms), senior citizens, blind people, those with Parkinson's or other diseases, even cell phone users all require keyboard commands to navigate a website.

By requiring a user to point and click on specific navigation options, cities increase the difficulty of using their website. The result is many constituents who would benefit from easy access to online information forego the site, and opt instead to call or drive to City Hall. Instead of creating a self-serve option, cities instead increase their costs by lowering access to important information.

❖ **Use of scripting without alternative methods for accessing information**

Many organizations and individuals have turned off scripting on their computers for a variety of reasons. Unfortunately, cities frequently rely on JavaScript-based navigation to add interest to their sites. Scripted navigation without alternatives leaves a website inaccessible to a wide range of disabled and non-disabled users. This will likely continue to be a long-standing issue for users because script-activated viruses continue to proliferate, and many businesses are understandably cautious about features they roll out to their staff.

Making Improvements

Accessibility is a process, not a product, and making a website accessible and usable requires a certain level of effort and education. Local government has shown a willingness to provide the highest level possible of customer service; however, a lack of understanding about the underlying principles and processes, coupled with the lack of experienced staff, makes this a difficult task.

When faced with the apparently daunting task of improving accessibility on their websites, many agencies opt for what seem to be quick fixes. Often this comes in the form of a system that converts the website to a text-based page. Unfortunately, this approach does not guarantee an accessible website, nor does it solve the underlying problems on the site. Given the importance of the Internet for saving government agencies time and money, investing in improving accessibility is investing in the organization.

So where to start?

❖ **Education**. As far as guidelines go, the Section 508 checkpoints are fairly comprehensive and clear. For web developers. The guidelines were not written for non-web professionals; their sometimes technical language makes it difficult for those involved in the day-to-day maintenance of a website, or those tasked with determining how accessibility will be achieved, to make appropriate decisions. Understanding the logic and principles behind the guidelines aids local government in building and maintaining an accessible website while fulfilling the mandate to provide the best customer service for the widest possible audience.

❖ **Policy Development**. As mentioned, there are two dominant sets of guidelines in the United States: WCAG and Section 508. Some states have adopted variants of 508 while others have written their own. With a few exceptions, local agencies are in a position to create their own standards or adopt one of the published guidelines. While we strongly recommend adhering to the WCAG Priority Two standards (which will, by default, make a site Section 508 compliant) due to their rigorous adoption process as well as periodic revision to reflect the current state of the industry, there are a variety of issues to be considered. By developing an accessibility policy, governments can set goals that are workable for their particular organization.

❖ **Training**. As noted above, accessibility is a process, not a product. In order to maintain ongoing accessibility, staff responsible for managing the website need to be trained in the practices and principles of accessibility. Once an organization's accessibility policy has been developed, procedures and guidelines for adhering to the policy should be implemented. The good news is that ongoing accessibility is not burdensome. The bad news is that it requires basic knowledge of web standards – something that has been lacking in the average government webmaster's training – and is not well supported by the most commonly used tools.

❖ **Improved Tools**. Possibly, one of the great fallacies of web development is that it's so easy anyone can do it. Tools have been created to make it effortless to throw together a website. Unfortunately, these tools do not facilitate the development and maintenance of the sort of complex and content rich websites most government agencies require. Tools that appear to be easy and cost-effective may actually limit what can be done with your website while creating dubious HTML in the process. Not only do these tools create accessibility barriers, they also create problems as new technologies emerge. A website doesn't have to (and shouldn't) cost a fortune; it should, however, meet established standards in order to function properly for all users.

Migrating a site to a content management system can also improve accessibility. Good content management tools can improve the entire web production process.

❖ **Planning**. Redeveloping a website is a large project, and, often, limited budgets preclude this option. This doesn't mean that creating an accessible website is out of the question. As with anything, developing a plan of action with logical, achievable goals can provide big results. We've identified the most common problems areas for government websites in this report – addressing those will improve accessibility immensely.

Conclusion

While the focus of accessibility guidelines is on the benefits for the disabled community, creating accessible, usable websites improves user experience for a wider audience. While local government sites currently do not achieve a high level of accessibility, city officials must be aware of the need to conform to established standards, usually Section 508 of the Rehabilitation Act. Education, training, and awareness will help local government achieve stated goals for accessibility.

Accessible websites are, by definition, standards based, resulting in websites that work across a broad range of devices and platforms. Again, this widens a site's audience. As budgets shrink while demands for high levels of service increase, it's critical that local government use the Internet to manage constituent expectations.

In order to achieve accessibility goals, agencies need to identify their problem areas using a series of automated and manual testing processes. They also need to learn more about the principles of accessibility and how to apply the guidelines to their particular site. Finally, cities need to understand that accessibility is a process, not a product, and make an ongoing commitment to providing the highest level user experience to everyone who uses the city's website.

Alt Tags offers a wide range of services for organizations working to fulfill their accessibility goals. In addition to consulting, education, and training, we offer various reports on accessibility-related issues as well as publishing frequent articles on the subject.

Contact us today about a customized analysis of your website. Our detailed report includes full testing results and recommendations for improving accessibility on your website. We can provide an accessibility roadmap for your staff or work with you to fix existing issues.

To learn more about Section 508 and how you can make your website compliant, contact us:

www.alttags.org

alttags@pandemic.com

(626) 791-5852

Section 508 Internet and
Intranet Accessibility Standards Amendments

Section 508 compliance, which is required for United States Federal government agencies and entities doing business with the Federal government, is based on WCAG 1.0. Section 508 is often voluntarily adopted by local governments or other groups wishing to comply with published accessibility standards.

❖ A text equivalent for every non-text element shall be provided (e.g., via "alt", "longdesc", or in element content).

❖ Equivalent alternatives for any multimedia presentation shall be synchronized with the presentation.

❖ Web pages shall be designed so that all information conveyed with color is also available without color, for example, from context or markup.

❖ Documents shall be organized so they are readable without requiring an associated style sheet.

❖ Redundant text links shall be provided for each active region of a server-side image map.

❖ Client-side image maps shall be provided instead of server-side image maps except where the regions cannot be defined with an available geometric shape.

❖ Row and column headers shall be identified for data tables.

❖ Markup shall be used to associate data cells and header cells for data tables that have two or more logical levels of row or column headers.

❖ Frames shall be titled with text that facilitates frame identification and navigation.

❖ Pages shall be designed to avoid causing the screen to flicker with a frequency greater than 2 Hz and lower than 55 Hz.

❖ A text-only page, with equivalent information or functionality, shall be provided to make a web site comply with the provisions of this part, when compliance cannot be accomplished in any other way. The content of the text-only page shall be updated whenever the primary page changes.

❖ When pages utilize scripting languages to display content, or to create interface elements, the information provided by the script shall be identified with functional text that can be read by assistive technology.

❖ When a web page requires that an applet, plug-in or other application be present on the client system to interpret page content, the page must provide a link to a plug-in or applet that complies with §1194.21 (a) through (l).

❖ When electronic forms are designed to be completed online, the form shall allow people using assistive technology to access the information, field elements, and functionality required for completion and submission of the form, including all directions and cues.

❖ A method shall be provided that permits users to skip repetitive navigation links.

❖ When a timed response is required, the user shall be alerted and given sufficient time to indicate more time is required.