Sound Off

Debating the disability divide: Does the ADA belong in Web design?

BY K. DANIEL GLOVER

When Slashdot.org early this year raised the issue of whether Internet sites should cater to the needs of people with disabilities, the debate turned ugly at times. Many users of the Web-log for the technologically savvy argued that designers must try to make their sites accessible to all. Others insisted that the 10-year-old Americans with Disabilities Act (ADA) is unwelcome in, and even a threat to, the Information Age. When it comes to the Web, they argued, the disabled deserve no special attention.

ILLUSTRATIONS **MIHO UCHIDA**

The Bobby Test

Here is how the top 30 companies in 1999's Silicon Alley 100 stacked up in CAST's Bobby test.

1. DoubleClick	fail
2. StarMedia	fail
3. Priceline	pass
4. Razorfish	pass
5. About.com	fail
6. Agency.com	fail
7. iVillage	fail
8. MTVi/SonicNet	fail
9. Flatiron Partners	n/a
10. Jupiter Communications	pass
11. CBS	fail
12. Morgan Stanley Dean Witter	fail
13. TheStreet.com	fail
14. ICANN	fail
15. Medscape	fail
16. Oxygen Media	fail
17. Reciprocal	fail
18. Merrill Lynch	fail
19. Pseudo Programs	fail
20. HotJobs.com	fail
21. Kozmo.com	fail
22. Edge Foundation	fail
23. AOL	fail
24. Markle Foundation	n/a
25. Rare Medium	fail
26. 24/7 Media	pass
27. Bolt Media	fail
28. Wit Capital	pass
29. NYU ITP	fail
30. Bloomberg	fail

***Note: Siliconalleyreporter.com passes but Siliconalleydaily.com fails.*
Source: www.cast.org/bobby/

Basic Requirements to Pass Bobby's Test

- Provide text equivalents for all images and multimedia such as animations, audio, and video
- Ensure that all information conveyed with color is also available without color
- Identify headers for data tables and make line-by-line reading sensible for layout tables
- Provide summaries of graphs and charts
- Identify document language and any changes of the language
- Organize content logically and clearly, such as with headings, list elements, meaningful links, and navigation bars
- Provide alternative content for features (e.g., applets or plug-ins) that may not be supported

An "anonymous coward" (the moniker Slashdot gives writers who refuse to identify themselves by name or e-mail address) summarized that viewpoint in a bluntly worded Feb. 7, 2000, note: "While I have sympathy for the disabled, and even agree with the ADA in general, this is ridiculous. The Web is naturally evolving into a graphically rich source of information that could not be expressed in words. ... I'm sorry. The burden is on the user. I'm not going to dumb down the graphics on my sites for anyone!"

David Rose, the co-executive director of the Center for Applied Special Technology (CAST), whose Bobby service tests the accessibility of webpages, winces when he reads comments like that. "I used to live in the South," he says, "and I remember the same comments about 'coloreds,' questioning why we should spend so much money to educate them or to remodel restaurants and gas stations so that there was one bathroom for both whites and blacks. To many, white people mostly, it made most sense to just stay with what was working fine—one for whites and one for coloreds."

But if Rose and his colleagues get their way, the anonymous cowards of Slashdot will become as marginalized as the bigots of the 1950s South. Web designers—and the corporate executives who give them marching orders—will think before they code. They will create pages that bridge the digital divide between the disabled and able-bodied. And in the end, the Internet will empower the disabled and help them overcome the obstacles of a bricks-and-mortar world.

Ask the disabled what they think, and indeed they will tell you that the Internet can make their lives better. An online survey of disabled people, taken between March 22 and April 5 for the National Organization on Disability, showed that they spend nearly twice as much time online and using e-mail as able-bodied people, and that nearly half of them believe the Internet has improved the quality of their lives.



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H. Stephen Kaye, Disabilities Statistics Center, University of California-San Francisco

The results do not surprise people who have worked to guarantee the disabled unimpeded access to online information. "The Internet has the greatest potential for enabling people with disabilities [out] of any technology ever developed," says Chris Ridpath, who works at the Adaptive Technology Resource Center (ATRC) at the University of Toronto in Canada.

But potential is the key word because as a March report for the Disabilities Statistics Center at the University of California-San Francisco shows, people with disabilities do not have the same access to the Internet as others. "[N]ew technologies hold great promise, but ... the computer revolution has left the vast majority of people with disabilities behind," H. Stephen Kaye wrote in "Computers and Internet Use Among People with Disabilities." "Only one-quarter of people with disabilities own computers and only one-tenth ever make use of the Internet."

The lack of "alt-text" tags, which describe images for blind people who are using screen readers, presents the greatest obstacle. "Images can be displayed, but they can't otherwise be processed the way text can," says Michael Cooper, head of CAST's Bobby project. "And images are used quite a bit in the Web, so that's a fairly common and quite severe problem in website design." The issue was at the heart of the National Federation of the Blind's decision to sue America Online last November for being inaccesible to the blind and therefore violating the ADA. But the NFB withdrew its suit in July when AOL agreed to ensure that its next version of software would be compatible with screen-reader assistive technology.

The issue of Web accessibility goes beyond alt-text tags, however. Sound files are of no use to the hearing impaired. Timed responses on dynamic pages, small targets on image maps, and mouse-only commands make online life difficult or impossible for people with motor disabilities. And long lists and pop-up windows can confuse people with learning disabilities.

"Most websites these days have some degree of access barrier," says Kynn Bartlett, director of the HTML Writer's Guild's AWARE Center and director of accessibility at Edapta, a San Diego start-up

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company working to give websites the intelligence to "morph" to varying needs and technologies. "I'd say at least 90 percent of them impose serious hurdles to access by people with disabilities."

Technology experts familiar with Web-design obstacles are reluctant to mention any offenders by name. Instead, they prefer to encourage greater accessibility by rewarding it. CAST, for instance, allows websites to post a "Bobby approved" banner on their sites if they pass the center's accessibility test. The center maintains a list of approved sites in a database.

The Bobby service enables anyone to check the usability of his or her favorite sites—and a little surfing quickly reveals the extent of the disability divide. Few of the big-name dot-coms—Amazon, eBay, Yahoo, eToys, E*Trade, and iWon, to name a few—could win Bobby's approval. Tests of those systems on July 20 triggered numerous "blue helmets" that indicate accessibility problems.

The inaccessibility of online grocers (Peapod.com), health-related sites (Vitamins.com and MedicineNet.com), and airlines (Continental and Delta) is perhaps more noteworthy. If the disabled could benefit from anything online, it would be the ability to shop for groceries, vitamins, and airline tickets or to access the "100-percent doctor-produced medical information" MedicineNet says it provides.

"Shopping online can be a real godsend," says Geoff Freed, project manager for the Web Access Project at the CPB/WGBH National Center for Accessible Media (NCAM). "But it does you no good to visit a grocery service if you can't navigate its website. You might as well try to get on down to the grocery store instead."

Commercial sites are not alone in their oversight of the needs of the disabled. Even with measures like the soon-to-be-implemented federal rule commonly known as Section 508, which would require government agencies to procure, develop, and maintain technologies that are accessible to the disabled, many government sites fall well short of meeting accessibility standards.

High-profile federal sites such as the Senate's also failed the Bobby test. (The White House's and the House of Representatives' sites passed.) Even more telling, the Equal Employment Opportunity Commission/Justice Department ADA Handbook online is not accessible, according to Bobby. While the Social Security Administration's Office of Disability would be Bobby approved, its publication "Working While Disabled: How We Can Help" did not pass the test.

Presidential candidates also do not seem to "get it," if a December 1999 study by the Internet consulting service OrbitAccess is any indication. Sen. John McCain's site won the accessibility battle, according to "Web Accessibility of the Presidential Candidate Sites," with Vice President Al Gore's in a close second. Texas Gov. George W. Bush finished next to last, rating higher only than Alan Keyes' webpage, because Bush's site was "crowded with unclear links, and decorative, undescribed image maps," among other things.

The report lambasted the candidates for producing "brochureware" that "conflicts with the Web paradigm of fresh information with direct, accessible navigation, useful for everyone." When OrbitAccess revisited the presidential sites six weeks after issuing the report, and after notifying the candidates of the study, it found that the campaigns not only had not addressed the problems but that some had actually created new hurdles.

Bobby is not the only tool available to webmasters who want to make their sites accessible. The ATRC, for instance, created A-Prompt, a software toolkit that checks for accessibility problems in HTML files and then prompts the user to make changes.

The World Wide Web Consortium also has published several versions of its detailed "Web Contents Accessibility Guidelines" and even began printing a pocket-size "Quick Tips Reference Card" because of popular demand. The Trace Research and Development Center at the University of Wisconsin-Madison serves as a clearinghouse on Web accessibility.

With such tools and guidelines widely and readily available, people who praise the potential of the Internet to help the disabled argue that ignorance, arrogance, and bigotry have kept the Web from fulfilling that potential. Advocates of a disability-friendly Web say their efforts have been hurt by myths about the time and money involved in making sites accessible and the dullness of "accessible" designs.

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Kynn Bartlett, director of the HTML Writer's Guide's AWARE Center

The AWARE Center's Bartlett, for one, rejects what he calls the false dichotomy between "flashy design" and "accessible design." "Web accessibility is never about removing the fancy stuff, but rather about including alternate ways to get the same information or perform the same task," he says.

The ATRC's Ridpath emphasizes that accessibility is not just a disability issue. The changes that make the Web more accessible to the disabled, he says, do the same for people who browse the Web by cell phone or other nontraditional means, or who disengage multimedia offerings in favor of text-only viewing.

"The real tragedy of access barriers," Bartlett says, "is that nearly all of them are avoidable. With a little care, a little education, and a little time, nearly all can be solved." ■ sar