



VOLUME 12 • NUMBER 2

Pages 1 and 8

FALL 2004

ISSN: 1526-5102

www.asaging.org/nest

Information Accessibility: Bringing The Web to Elders With Low Vision

by Aries Arditi

The Internet, perhaps more than any other technological development in recent history, has the potential to improve the lives of older people with visual impairment. With access to the World Wide Web, people with severe visual disability can perform such essential tasks of daily living as shopping, banking and handling correspondence without the assistance of a sighted person. The psychological benefit of being able to complete such tasks privately and independently cannot be underestimated: The experience is enormously empowering and equalizing for elders with visual impairment.

Ironically, although convenient access to the Internet is now readily available to blind people, the Web remains less accessible for those with moderate or severe low vision. Development of Web-access technologies for users with low vision has lagged behind that for blind users for political, social and technological reasons:

Political. Historically, the blind community has had a much stronger political voice than that of people with low vision. Most people with low vision are older, have become visually impaired late in life and are reluctant to identify themselves as visually impaired—much less join a group that advocates for their rights. Blind people, on the other hand, have a clear, unified voice within the disability community.

Blindness organizations, for example, have pressured the U.S. government to enforce such laws as the Americans With Disabilities Act, which promotes accessibility of Internet technologies for everyone, regardless of ability. Even though such laws protect people with low vision, too, few if any organizations represent their political voice. As a result, the general public tends to equate visual disability with blindness.

Social. Developers of Web technologies also tend to view all people with visual impairment as blind. Most standards for computer software address accessibility for people with visual impairment as if all of them had no vision. This belief probably stems in part from a lack of understanding of what low vision is, and possibly also from a prevalent belief that those with partial sight should learn to accomplish tasks without vision so they can take advantage of tools and techniques developed for blind people and prepare for the possibility of eventually losing all their vision.

In fact, tools and techniques useful for blind computer users are inclusive in the sense that the entire continuum of people with visual impairment can, in principle, use them. But for

those with even very low vision, performing tasks visually is nearly always preferable when it is possible to do so.

Technological. Another reason Web technology for low-vision users has lagged behind that for blind people is because producing an effective interface for those with low vision is a more complicated task for software developers. The range of visual acuities, for example, that a useful low-vision Web browser would need to address is about 20/60 to 20/1000. Providing a single visual interface that will accommodate such a large range of required sizes is very difficult.

By contrast, the computer interface for all blind users is the same, requiring visual display to be translated into some form of auditory information. Understandably, software designers find providing computer usability to blind people a conceptually simpler task than adapting programs for low-vision users. Some products, especially screen-magnification software, do a reasonably good job of enhancing computer access for those with low vision. But these technological solutions tend to be expensive, platform specific and incompatible with other software.

SOLUTIONS FOR LOW-VISION USERS

Accessible markup—programming that instructs the browser program on how documents should be visually presented—is probably the most ubiquitous accessibility solution for low vision. Accessible markup and other website-authoring solutions are designed into websites rather than implemented on users' computers. These types of solutions include text-only websites, which alleviate some of the problems experienced by people using text-to-speech systems for Web browsing. Text-only sites, however, require maintenance of parallel versions of websites, an expense that few sites are willing to bear. And sites that maintain text-only versions often do not update them regularly.

Style-sheet switching, another possible solution to low-vision accessibility, is a technique that allows website users to select from a palette of options that may include several different text sizes and color schemes. One drawback to this and to all authoring solutions, however, is that the authors of websites must comply with accessibility standards. Accessibility, then, becomes restricted to just those sites that obey the standards. The site at www.visionconnection.org is a good example of a website accessible to users with low vision. In addition, this site offers style-sheet switching to registered users.

With education and advocacy, the future may bring effective, affordable accessibility solutions for Internet users with low vision. Such technological advances will allow elders with visual impairment to reap the full benefits of Internet access. ■

Aries Arditi is a senior fellow in vision science at the Arlene R. Gordon Research Institute at Lighthouse International in New York City. Visit the institute home page at www.lighthouse.org/research_main.htm.