

Communications

TOOLS AND TECHNOLOGIES TO KEEP YOU CONNECTED

All Access Pass

Enabling technologies offer business possibilities

PEOPLE WITH VISUAL, HEARING, OR OTHER physical impairments are usually familiar with the assistive technology that helps them live, learn, and communicate with others. But not every home-based entrepreneur is aware that these technologies can help them communicate with the largest possible audience.

There are more than 30 million people with disabilities who can be affected by the design of computer software, according to Mike Paciello, founder and CTO of Web-ABLE, a Nashua, N.H.-based consulting firm that focuses on assistive technologies. In 1998, the President's Committee on Employment of People with Disabilities reported that consumers with physical disabilities control more than \$175 billion in discretionary income. "For SOHOs, that seems to be incentive enough to use these technologies," says Paciello.

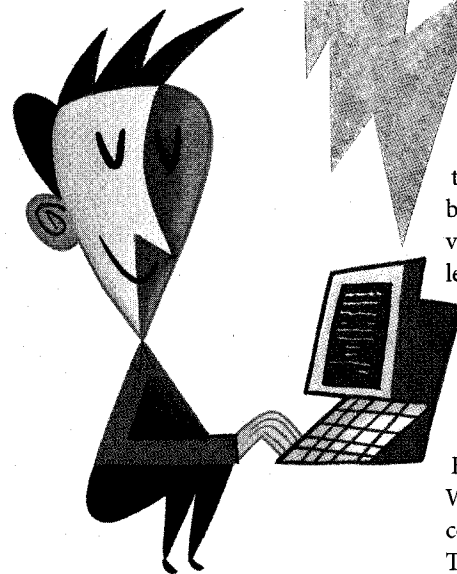
At the most fundamental level, your Web site can be specially coded to accommodate people with disabilities. Directions for doing this have been collected by the World Wide Web Consortium (W3C). The organization's Web Accessibility Initiative can be found at www.w3.org/WAI. "The guidelines cover everything from how to create accessible Web sites, designing accessible authoring tools, education, outreach, usability, validation, and best practices," Paciello says. A few tips:

Images & animations. Describe the function of each visual element and avoid unnecessary animations that complicate the site.

Image maps. Use text to interpret hot-spots, allowing visually impaired visitors to navigate without assistance.

Multimedia. Provide captioning and transcripts of audio clips and vivid descriptions of video clips.

Hypertext links. Use text that makes sense when read out of context. For example, avoid "click here" in the middle of sentences



when referring to links.

Page organization. Use headings, lists, and consistent layout and style wherever possible.

Graphs, charts, and tables. Summarize any visual element or use the Longdesc attribute to interpret visual details.

Scripts, applets, & plug-ins. Provide alternative content in case active features are inaccessible or unsupported. This helps all visitors enjoy the multimedia features on your site.

Frames. Use noframes and meaning-

ful titles so visually impaired visitors can follow the organization of the site.

Check your work. Validate your site. Use the tools, checklists, and guidelines at W3C (www.w3.org/TR/WCAG).

New products hold even more promise for communicating with this audience. For example, with a \$399 RIM 950 handheld and Blackberry software (519-888-7465, www.rim.net) hearing impaired users can receive wireless text messages wherever they go. Paciello advises that taking advantage of text messaging allows even small businesses to reach out to the hearing impaired. "I believe we'll see advances in similar services that can be reproduced at the Web level that will greatly enhance communication processes between the deaf and hearing persons," he says.

In addition, text-to-speech software and Braille keyboards keep visually impaired users connected. The 2.9-pound BrailleNote (starting at \$3,400, HumanWare, 800-722-3393, www.humanware.com) is a portable console for the blind. The device comes with a keyboard, high-quality microphone, and speaker, and uses a Windows CE-based suite of applications including a word processing program, e-mail package, a PIM, and a phone directory with a relational database that can interface with mainstream computing products. "It's a PDA for people that are blind," says Judy Seiler, director of marketing at HumanWare. Just as the sky is the limit for users of these technologies, so is the market available for the products and services your business provides.

—Dan Costa