A New World of Accessibility

By Robin Springer

In 1994-95, 58 percent of legally blind Americans 18 to 54 years old were unemployed compared to 18 percent of 18 to 54 year olds with no serious impairments[1]. The numbers are staggering, with the disparity being attributed, in part, to inadequate training in access technology and lack of awareness that technology exists to accommodate people who are blind.

"If this was any other minority group, there would be a public outcry," says Jay Leventhal, editor-in-chief of *Access World Magazine*.

According to "Vision Problems in the U.S."[2], blindness and vision impairment cost the federal government more than $4 billion annually in benefits and lost taxable income. Why does it have to be so bleak? We have products to accommodate for vision loss. Whether it is a screen reader, money reader, or book reader, we have the technology to improve the statistics.

In the 1960s, the only technology available was the Braille slate (which requires users to emboss Braille cells one dot at a time) and reel-to-reel tapes. Terry, who was born blind, was in primary school during this time. She learned to touch-type at eight years old and never mastered geography because, although tactile maps existed, they were not easy to use. "It wasn't real to me so I wasn't interested," she says. She also remembers completing a master's program years later; she would often type entire papers, not knowing the typewriter had run out of tape until she finished the assignment.

Today we have computers. We have products like the Talking Tactile Tablet, a viewer for audio/tactile materials, which lets users read maps and pictures by feeling the tactile display. The system speaks the description of the region being touched.

John, a small-business owner, recalls even as recently as a few years ago he could, "take technology or leave it." Today he can't live without it. Clarence, who travels more than two weeks each month for business says, "The world opened up for (him)," when he was able to access the Internet. He can now buy a gift for his wife without going to the mall with her and asking her to look the other way when he makes his purchase.

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Many people, who are blind, including Terry, John and Clarence, believe they have all the technology they need. Screen reading software like Window-Eyes and Jaws (which support all SAPI 4.x and 5.x compliant synthesizers) reads information on the computer. The software, which can be used with Citrix and Microsoft Terminal Services, reads documents and tells the user information ranging from the active application to document name, time of day and icons on the desktop. This software makes it possible for blind users to access the same information as sighted users.

For reading, blind individuals have options that include audio books and Braille format, but they can also use reading software like Kurzweil 1000 to access books and other reading material. Reading software turns a PC and scanner into a reading machine, and even shares information in formats including MP3 so users can take their reading with them when they are away from the computer.

Money readers like Bry-Tech's NoteTeller 2 and Canadian Bank Note Reader are essentially sophisticated OCR products with speech, tactile, or tone output. When a user places a bill into the reader, the unit speaks the denomination. Users no longer have to trust they are being given correct change, ask others to confirm the bill's denomination, or separate denominations by placing them in different pockets.

Cell phones have traditionally been inaccessible to people who are blind because the devices rely on graphical user interfaces. Products including Mobile Speak by Optelec provide access to features sighted users take for granted. Users can add contacts, check logs for missed and received calls, access incoming caller ID information, and check battery and signal strength.

Sendero Group combines a GPS with its BrailleNote and VoiceNote. The device creates routes for walking or riding in a vehicle, calculates distance and speed, and allows users to understand the environment before traveling.

Whether it's reading a book, accessing the Internet, navigating a city or a cell phone, technology is providing more opportunity for people who are blind than ever before. Spread the word.

[1] National Center for Health Statistics (1998), National Health Interview Survey--Disability Supplement (1994-95)

[2] "Vision Problems in the U.S." (2002), Prevent Blindness America

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