

# ***Serving Users Who Need Help Reading the Fine Print—It's ALL Fine Print to Them: Making Your Library More ADA-Compliant***

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## ***Abstract***

Learn how one medium-sized, public university library collaborated with the campus' Office for Disability Services to set up PCs with adaptive software in library reference rooms. Hear how funding and hardware/software expertise were shared, and learn how your library can implement the expertise on your campus to ensure more users with disabilities have equal access.

Until last year, the two on-campus libraries at the University of California, Irvine (UCI), a public institution of roughly 20,000 students on a "barrier-free" campus built in the mid-1960s, maintained a Special Reading Room for the Sensory Impaired with a modest array of equipment that had been upgraded a few times during the last ten years. The fourth-floor room in the Main Library—far from service points on the first and second floors—housed:

- Kurzweil Reader
- Perkins Braille Writer
- Visualtek Enlarger
- Variable speed cassette recorder

- Braille and cassette-tape dictionaries
- Fluorescent reading lamp

By the end of 2000, the renamed Disability Resource/Technology Room contained new hardware and software:

## **HARDWARE**

- Closed-Circuit TV (CCTV) - \$3,000 (with 20-inch color monitor)
- Dell OptiPlex Computer w/ Pentium III Processor
- Adjustable-height table - \$1,200
- Hewlett-Packard Scanner - \$400
- Zip Drive (\$180)

## **SOFTWARE**

- Kurzweil 1000 (scan & read for the visually-impaired) - \$1,100 for single site; no site license available
- Kurzweil 3000 (scan & Read for the reading/learning disabled) - \$2,000 for single site, \$2,700 for lab pack (1 scan & read station and 4 read-only stations)
- JAWS (Job Access With Speech) screen reader - \$795 for W95, W98; \$1,495 for NT (single user); 5-user site license costs \$1,700 for W95, W98; \$2,000 for NT

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- ZoomText Xtra (screen magnification) Level 1 & 2 - \$600 for single site, \$3,000 for 5-user site license.

- [coming soon] voice-recognition software

In addition, a PC with adaptive software had been installed in the Main Library reference room and in the Science Library reference room, *each* making available to all users:

#### **HARDWARE**

- Dell OptiPlex Computer w/ Pentium III Processor
- Adjustable-height table
- Hewlett-Packard Scanner
- Zip Drive
- headset
- [coming soon] trackball mouse

#### **SOFTWARE**

- Kurzweil 1000
- Kurzweil 3000
- JAWS
- ZoomText Xtra

Except for the three new PCs, *all* of the hardware, software, and the adjustable-height tables were paid for by the UCI Office for Disability Services (ODS) through its own budget—no magnanimous donors, grant monies, or other donations. The ODS Technology Coordinator worked closely with the Libraries' Systems staff to install and de-bug the programs. What made this transformation possible? How did so much change take place in less than a year *at so little expense* to the UCI Libraries, and with only one librarian working as the liaison between ODS and the Libraries?

Despite the passage of the Americans with Disabilities Act (ADA) in 1990 (<http://www.usdoj.gov/crt/ada/pubs/ada.txt>), it took a convergence of demographic changes in 2000 to propel the University of California, Irvine (UCI) Libraries into the realm of modern, adaptive technology used by library patrons who have low-vision, are blind, dyslexic, and/or use wheelchairs. By working more closely with incoming students with visual disabilities, the Libraries also implemented other, low- and non-technological changes (e.g., signage and kickstools) to improve access for all users.

What were the converging demographic changes that strengthened the casual partnership between the campus Office for Disability Services and the UCI Libraries?

- Planned-for campus growth to increase enrollment by 50% in the next ten years (i.e., by 2010) nearly tripled in one year the demand on the ODS 4-PC computer lab

- More students were using the Internet more frequently, including course syllabi, online catalogs, electronic reserves, JSTOR, Muse, and other web-based resources paid for by the Libraries.

- More incoming students had been using adaptive software (at home) before coming to UCI and expected it to be available on campus.

It's been observed that "one in ten incoming college freshmen [are] reporting one or more disabilities" (Cunningham 2000), so academic libraries can anticipate more—not fewer—students who need adaptive software and other accommodations in order to have equal access to collections and services. While libraries are delivering more full-text materials to student and faculty desktops, there are still plenty of students who come to academic libraries—the buildings—to check out books (on paper), to read journal articles (on paper), and to consult reference materials (on paper). Some come to use CD-ROMs, read microfiche, and to watch videos. Surveys taken by the UCI Libraries over the last several years indicate over 40% of the reference questions are asked by non-UCI patrons—users ineligible for remote access to the UCI-licensed databases. So, they must come to campus to use them.

The transformation began when ODS approached the Libraries in mid-2000 with an offer to expand the ODS computer lab by establishing a fully-loaded PC in the Main Library and another in the Science Library, both on adjustable-height tables. The four PCs in the ODS computer lab (<http://www.disability.uci.edu/ODS/DCL/dclinfo.html>) were in constant use by 25–30 students, a dramatic increase from 10 students the year before. Moreover, the ODS lab was open only M–F 8–5pm. All ODS asked for was for the Libraries to provide the PCs; ODS would pay for everything else. ODS had already established a loaded PC in the campus computer lab that was open 24 hours/day.

This offer improved the Libraries' ADA compliance dramatically:

- Low-vision and blind students would now have access to campus and library resources on the Internet, *plus* the same reference assistance available to other users.

- Students with disabilities would not be "ghetto-ized" in a fourth floor room far from the reference and loan desks, although a separate, fully-equipped room would still be maintained for exam-proctoring and other uses.

- Students could scan non-circulating materials (e.g., all bound and unbound journals) onto a diskette and then read them at home with the adaptive software on their PCs. Students who formerly needed extra time to read reserve

materials could now scan them and—at home—take more time to read them.

The software was chosen by the ODS Technology Coordinator, who stays abreast of the students' adaptive software needs. What does the software do?

**Zoomtext Xtra** ([www.zoomtext.com](http://www.zoomtext.com)) magnifies the words/images on the screen. As baby boomers age and begin needing bifocals and trifocals, screen-magnification software will be helpful to more and more PC users. The software offers several different "styles" of displaying the enlarged text/images, such as using split-screens (with enlarged text on one side and original-size text on the other), high-contrast text (converting to white text against a black ground).

**Kurzweil 1000 and 3000** (<http://www.LHSL.com/kurzweil1000/> and <http://www.lhsl.com/kurzweil3000/>) are scan-and-read software programs that assist those with reading disabilities and low vision. Used with a scanner, these products can read a variety of text formats, including columns (e.g., newspapers), bills, and articles with boxed text. The Kurzweil 3000 reads scanned and electronic text aloud with human-sounding synthetic speech, highlighting the words as they are spoken.

**JAWS (Job Access with Speech)** (<http://www.hj.com/JAWS/JAWS.html>) is screen-reading software for the blind.

The UCI Libraries had already made its homepage more accessible. Indeed, the evolution of both that site (<http://www.lib.uci.edu>) and the campus homepage (<http://www.uci.edu>) showed a growing simplicity of layout and font. As library sub-sites have proliferated and evolved, however, it is unlikely that all of them are as accessible as they could be. In December 2000 the Libraries hired its first Web Manager. The design, construction, and maintenance of the Libraries' website had grown too large and complex for the hard-working, six-member Web Implementation/Interim Team (WebIT). The Web Manager has become the team leader of this group, which will be able to undertake several projects that had been put on hold until the new position was filled. The five-page ERIC Digest, "Accessible Web Design," ([http://www.ed.gov/databases/ERIC\\_Digests/ed435384.html](http://www.ed.gov/databases/ERIC_Digests/ed435384.html)) provides an excellent introduction to this topic, including a comprehensive list of resources—many of them websites. One is Bobby (<http://www.cast.org/bobby>), a Web tool that checks websites for accessibility.

This "miracle windfall" had its downside. Money alone could not improve the Libraries' accessibility and ADA compliance. The ODS Technology Coordinator and members of the Libraries' Systems staff have spent—and continue to spend—hours maintaining the adaptive-technology PCs:

- The software may be a target of "hackers" who wonder what the added icons on the screen are for. On the dozens of occasions when the software isn't working, library staff have suspected some users have been tampering with them.

- Both the ODS Technology Coordinator and the Systems staff have many other projects, so at times days have gone by before non-functioning software could be examined.

- Maintaining security and privacy on the PCs has been difficult.

- Because the headset and trackball mouse are vulnerable to theft, they must be checked out by users who need them. The extra steps of checking them in and out, sometimes by users who are already mobility challenged, is a regrettable hassle.

Almost no training and no additional staffing have been needed. When the adaptive technology is not needed, users can ignore the adaptive software (a separate icon on the screen) and use the public PC just like any other PC in its row. The only indication of the adaptive technology is the table-top scanner and a sign posted at the new public PCs, which have been placed alongside other public PCs. The adjustable-height tables have the same color and finish as the plain tables. The modest-size sign reads:

#### **Users with disabilities have priority use of this PC**

This PC, which is on an adjustable-height table, has the following software functions for people with disabilities:

- Screen magnification (Zoomtext Xtra)
- Screen Reader (JAWS)
- Scan and Read software (Kurzweil 1000 and 3000)

This PC also provides access to [local and union online catalogs], and other Internet sites available at all of the PCs on this floor. Non-disabled users may be asked to relocate to another PC.

For assistance with any of the programs available at this PC, please contact the Reference and Government Information Desk on this floor.

If you have any questions about the use of this adaptive technology computer station, please contact the UCI Office for Disability Services (ODS) at (949) 824-7494 (M–F, 8:00 a.m. – 5:00 p.m.), which be reached from a campus phone on this floor. Training from ODS may be necessary to use this adaptive technology.

The reference desk librarians and library assistants have learned the basics of how to open each software program but are far from adept. That introduction to the software took about two hours, so hands-on use could be explored,

and questions could be asked. A basic guide (on paper) prepared by ODS is at the reference desk for convenient referral. The Libraries have not yet had any users who have not already known how to use the software. ODS staff have introduced students to the software with one-on-one tutorials lasting less than an hour. ODS is willing to train non-UCI users (e.g., the general public, students and faculty affiliated with other schools) to use the adaptive software, too, thereby removing a significant burden from the Libraries. In the Main Library, the headset and trackball mouse are checked out at the Multimedia Resource Center, which faces the reference desk and is open all hours the building is open.

What other things can libraries do to make their services and collections more accessible?

- Learn the simple, built-in ways to enlarge the screen. For example, in pdf files, there is a Zoom In Tool—a magnifying glass (with a plus in the glass)—in the toolbar. Clicking on it turns the cursor into the tool. Left-clicking enlarges the text with each click, going up to 400% and larger.
- Create signage and maps that use high-contrast, large letters, and no busy backgrounds.
- If possible, avoid placing maps and/or signage in a glass case where glare and the distance between the text/images and the glass makes reading difficult for low-vision readers and those in wheelchairs.
- Place signs where patrons with low vision and those in wheelchairs can get close to them with a magnifying glass.
- Keep plenty of kickstools in the stacks, so patrons with low vision can get close to the spines of the top shelves.
- Choose kickstools that are in high contrast to the flooring and the shelving, so they are easy to find. Grey kickstools against tweedy-gray carpeting may look very coordinated, but low-vision users practically have to walk into them to find them.
- Low-vision users sometimes need more light—to create greater contrast—on the lowest shelves. They might bring a flashlight to the library for this purpose. Libraries with disaster kits can put their flashlights to extra use by making them available at the reference desk or other service points for low-vision users to check out to use in the stacks.
- Where there are rooms of non-circulating materials, such as a current periodicals room, low-vision and blind users should be given “borrowing” privileges to remove those materials to a scanner and/or PC with adaptive software elsewhere in the library.

- Raise a few study tables—at least one on each floor of the library—on blocks, so wheelchairs with arms can slide under them.

- Offer individualized or small-group tours of the library to students—especially new students—with disabilities. Using adaptive technology if possible, include a tour of the library’s homepage.

One of the biggest—and most expensive—boons libraries can provide is full-text access online. For all users this not only saves trips to the campus, which can be an extra chore for those with visual and mobility disabilities, but makes library materials available around the clock. Electronic reserves eliminate the threat of expensive overdue fines.

The stronger partnership between the UCI Libraries and the campus’ Office for Disability Services has increased its sensitivity to the needs of its growing number of students with disabilities. Providing ODS with a library liaison has smoothed communications, especially given the bureaucracy of a medium-sized institution with two branches. The Libraries saved an enormous amount of time and energy by relying completely on the expertise of the ODS staff, which knows the needs and abilities of its student population better than any other campus unit. In addition, the technical expertise to install, de-bug, and trouble-shoot the software and hardware required both ODS Technology Coordinator and the Libraries’ Systems staff to work closely together.

In a year or two the software and hardware described in this paper may well sound semi-obsolete. The table-top scanner may be replaced by a handheld device resembling a mouse or a wand. Depending upon the needs of the UCI students, adaptive keyboards may be made available. The most efficient way to upgrade the technology will require the Libraries and ODS to continue working closely together. The collaboration is a win-win-win partnership for the Libraries (and its long hours seven days a week), ODS (with its considerable expertise but 40-hour/week lab), and a growing number of students in a demanding academic setting.

In 1999 the California legislature passed Assembly bill AB 422, which requires “a publisher or manufacturer or instructional materials offered for adoption or sale in California” to “provid[e] to the state, at no cost, the right to transcribe, reproduce, and distribute the material in braille, large print, recordings, or other accessible media for use by pupils with visual disabilities. This right includes computer diskette versions of instructional materials if made avail-

able to any other state, and those corrections and revisions as may be necessary. This bill would require every individual, firm, partnership or corporation publishing or manufacturing printed instructional materials, as defined, for students attending the University of California, the California State University, or a California Community College to provide to the university, college, or particular campus of the university or college, for use by students at no additional cost and in a timely manner, any printed instructional material in unencrypted electronic form upon the receipt of a written request, provided that the university or college complies with certain conditions.” (- Legislative Counsel’s Digest). Similar legislation may have passed in other states.

The UCI ODS philosophy of balancing access with independence has been a valuable lesson for the Libraries. Empowering students to do more for themselves—and relying less on others—prepares them for the “real world.” This fits well with the Libraries’ and the university’s shared mission.

*This paper with embedded links is at: <http://sun3.lib.uci.edu/~cjwoo/acrl2001denver.html>*

### Resources

*Accessible Web Design* (ERIC Digest) [http://www.ed.gov/databases/ERIC\\_Digests/ed435384.html](http://www.ed.gov/databases/ERIC_Digests/ed435384.html).

*Americans with Disabilities Act* of 1990 <http://www.usdoj.gov/crt/ada/pubs/ada.txt>.

Bobby (<http://www.cast.org/bobby>) “Bobby is a free service provided by CAST [Center for Applied Special Technology] to help Web page authors identify and repair significant barriers to access by individuals with disabilities.”

California Assembly bill AB 422 (chaptered) [http://www.leginfo.ca.gov/pub/99-00/bill/asm/ab\\_0401-0450/ab\\_422\\_bill\\_19990915\\_chaptered.html](http://www.leginfo.ca.gov/pub/99-00/bill/asm/ab_0401-0450/ab_422_bill_19990915_chaptered.html).

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Schuyler, Michael. Adapting for Impaired Patrons: 24–29

Morgan, Eric Lease. Adaptive Technologies for Better Service: 35–36.

Balas, Janet L. Online Resources for Adaptive Information Technologies: 38–40.

Rouse, Veronica. Making the Web Accessible (for disabled users of library multimedia technologies): 48–53.

Wlodkowski, Tom. Making CD-ROM’s Multimedia Work for All Users: 63–66

Cunningham, Carmela. 2000. Rights of Way: Adaptive Technologies on Campus. *Syllabus* 14 (September): 32–36.

*EASI: Equal Access to Software and Information* (<http://www.rit.edu/~easi/>) “Students and professionals with disabilities have the same right to access information technology as anyone else.”

Foos, Donald D. and Pack, Nancy C. (editors). 1992. *How Libraries Must Comply With the Americans with Disabilities Act (ADA)*. Phoenix Ariz.: Oryx Press.

JAWS (Job Access With Speech) screen-reading software <http://www.hj.com/JAWS/JAWS.html>.

*Kurzweil 1000* scan and read software <http://www.LHSL.com/kurzweil1000/>.

*Kurzweil 3000* scan and read software <http://www.lhsl.com/kurzweil3000/>.

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Mates, Barbara T. 2000. *Adaptive Technology for the Internet: Making Electronic Resources Accessible to All*. Chicago: American Library Association. [full-text: [http://www.ala.org/editions/openstacks/insidethecovers/mates/mates\\_toc.html](http://www.ala.org/editions/openstacks/insidethecovers/mates/mates_toc.html)] NB: Many of the URLs in the appendices are either wrong (garbled) or have changed, according to the review of this book in *College & Research Libraries* 61(5) (September 2000): 472–73.

Paciello, Michael. 2000. *Web Accessibility for People with Disabilities*. Berkeley, Calif.: CMP Books.

*Web Accessibility Initiative* (<http://www.w3.org/WAI/>) Mission: “The World Wide Web Consortium’s (W3C) commitment to lead the Web to its full potential includes promoting a high degree of usability for people with disabilities.... WAI, in coordination with organizations around the world, pursues accessibility of the Web through five primary areas of work: technology, guidelines, tools, education and outreach, and research and development.”

*WebABLE!* (<http://www.webable.com>) “is the authoritative Web site for disability-related internet resources. WebAble!’s accessibility database lists hundreds of internet based resources on accessibility.”

*Zoomtext Xtra* screen-magnification software [www.zoomtext.com](http://www.zoomtext.com).