If I Could Hear What You See: Electronic Resources and the Visually Impaired Patron

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US Statistics on the Blind & Visually Impaired

- 6-8 Million Blind & Visually Impaired Americans are living in households (not institutionalized or homeless)
- 2-3 Million are adults who are employment-aged (ages 18-69)
- 1-1.3 Million are employed
- 16% have some college education; 24% of these have college degrees

1American Foundation for the Blind
http://www.afb.org
What is Legally Blind?

- Legal blindness is a level of visual impairment that has been defined by law to determine eligibility for benefits. It refers to central visual acuity of 20/200 or less in the better eye with the best possible correction, as measured on a Snellen vision chart, or a visual field of 20 degrees or less.

- A patron can be visually impaired and need adaptive technology without meeting the legally blind criteria.

The Personal Side of the Issue
Terry Christiansen, graduate student

- At age 41, he contracted Leber’s optic neuropathy, a disease of the optic nerves.

- User of ArticleFirst, RLG, Project Muse, JSTOR

- Uses OpenBook software for accessibility

Accessibility Problems Encountered:
- Software incompatibility (e.g., JAWS doesn’t work with OpenBook)
- PDFs that first need to be printed, then scanned into OpenBook
- Library equipment with accessibility problems (lack of high contrast, audio or Braille controls)

What Librarians Need to Know
- “Over there” doesn’t mean anything to the visually impaired patron
- Know how to help without fostering learned helplessness

The Laws

- **Rehabilitation Act of 1973**: Section 508 mandates that all educational programs that receive federal funds are accessible to all students.

- **American With Disabilities Act of 1990**: Extends the requirements of the Rehabilitation Act to the entire nation, with some exceptions, not just to programs that are the recipients of federal funds.

- **Telecommunications Act of 1996**: Increases the standard from "Reasonable" to "Readily Achievable".
Common Tools for Blind & Visually Impaired Patrons

- Dragon Naturally Speaking (http://www.scansoft.com/naturallyspeaking/)
- IBM Homepage Reader (http://www-3.ibm.com/able/solution_offerings/hpr.html)
- JAWS (http://www.freedomscientific.com/fs_products/software_jaws.asp)
- Kurzweil 3000 (http://www.kurzweiledu.com/products.asp)
- Omnipage (http://www.scansoft.com/omnipage/)
- OpenBook (http://www.freedomscientific.com/fs_products/software_open.asp)
- SuperNova (http://www.dolphincomputeraccess.com/products/supernova.htm)
- Triangle (http://tap.oregonstate.edu/WinTriangle/WinTriangle.htm)
- Genie II Computer Interface CCTV
- Scanners
- Braille

Early Database Accessibility

- The Technology Access Program (TAP) at OSU has reviewed database accessibility since 1997.

- In 1997, most were accessible (60% with some difficulty) (OSU Library’s collection was mostly CD-based at this time)

- In 1999, 95% of the databases were inaccessible (most had moved to the Web)
3 Years Later: A Major Turnaround in Accessibility

- 120 Databases on 37 platforms were evaluated in 2002
- 95% of the databases now accessible


Accessibility vs. Usability

Vast majority of databases are accessible, but…

- 40% lack meaningful ALT tags for images and image-based elements
- 40% lack descriptive link information
- 85% do not have capability to skip repeatedly occurring navigation information

Electronic Journal Accessibility Study

- In 2004-05, OSU Libraries & TAP collaborated on the first systematic evaluation of electronic journal accessibility
- Results are being compiled and analyzed

Preliminary Electronic Journal Study Results

- 83 journals from 55 publishers have been evaluated to date
- 80% of the journals are fully accessible based on Section 508 criteria; 11 of these failed usability evaluation
- NRC Press is the only publisher which met all accessibility and usability criteria
The Same Article? Yes!

- [http://medicine.plosjournals.org/perlserv/?request=get-document&doi=10.1371/journal.pmed.0020079](http://medicine.plosjournals.org/perlserv/?request=get-document&doi=10.1371/journal.pmed.0020079)

**DESCRIPTION of CASE**

A 75-year-old right-handed woman presented with symptoms suggestive of a right hemispheric stroke (right hemiparesis and left arm weakness). She had no previous transient ischaemic attacks and normal vision in one eye due to a temporary lack of blood flow. Her medical history included long-standing hypertension and chronic obstructive pulmonary disease. She was on amlodipine and fluticasone inhalers.

On examination, the patient had a Glasgow...
What You Can Do

- Get familiar with the tools used by your organization to meet the needs of blind & visually impaired users\(^1\)
- Include accessibility and usability in your selection criteria for new electronic resources
- Advocate for accessibility of electronic resources with your vendors

\(^1\)Appendix 3 of the 2002 Stewart article summaries the results of last database evaluations [http://tap.oregonstate.edu/research/Site%20Evals.htm](http://tap.oregonstate.edu/research/Site%20Evals.htm) (Accessed 23 May 2005)

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