


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

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US Statistics on the Blind & Visually Impaired¹

- 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

Terry was profiled in the *Corvallis Gazette-Times* newspaper: See Rouse, J. (March 5, 2005) "Guiding Light." *Corvallis Gazette-Times*.
http://gazettetimes.com/articles/2005/03/06/news/top_story/news01.txt
(Accessed 23 May 2005)



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.kurzweilededu.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
- Brailers

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 Accessibility¹

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

¹Stewart, R. (2003). "Accessibility of online databases. A usability study of research databases", Technology Access Program, Oregon State University. Available: <http://tap.oregonstate.edu/research/ahg.htm>
(Accessed 23 May 2005).



Accessibility vs. Usability

Vast majority of databases are accessible, but...¹


- 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

¹Stewart, R., Narendra, V. and Schmetzke, A. (in press). "Accessibility and Usability of Online Library Databases," *Library Hi Tech*.



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>

DESCRIPTION of CASE

A 75-year-old right-handed woman presented with symptoms suggestive of a right hemisphere stroke (right arm and left arm weakness). She had no previous symptoms of a previous transient ischaemic attack or vision in one eye due to a temporary lack of blood flow. Her medical history included long-standing hypertension and 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 users¹
- Include accessibility and usability in your selection criteria for new electronic resources
- Advocate for accessibility of electronic resources with your vendors

¹Appendix 3 of the 2002 Stewart article summarizes the results of last database evaluations <http://tap.oregonstate.edu/research/Site%20Evals.htm> (Accessed 23 May 2005)



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