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## Library Services and Construction Act: Testimonies (1994): Speech 01

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# **TESTIMONY**

*presented by*

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Task Force on Telecommunication/Communication Accessibility**

*supported by*

**American Council of the Blind  
Association for Education and Rehabilitation  
of the Blind and Visually Impaired  
American Foundation for the Blind  
National Center for Law and Deafness  
National Association of the Deaf  
RESNA  
Telecommunications for the Deaf, Inc.  
United Cerebral Palsy Associations  
World Institute on Disability**

*before*

**UNITED STATES Senate  
103rd CONGRESS, 2nd SESSION**

**COMMITTEE ON COMMERCE, SCIENCE  
AND TRANSPORTATION**

*May 24, 1994*

## Summary of Testimony

Currently, much of the information required for full participation in our society is inaccessible to millions of people with disabilities. For example, daily newspapers, magazines, government documents, printed paper of all kinds, as well as much of what we see on TV is virtually unusable by people who have difficulty with seeing, hearing, using their hands, learning or a host of other functions. Consequently, these individuals find themselves excluded from opportunities for employment, education, entertainment and much more. Advances in telecommunications equipment, networks and services, along with the production and storage of information as digital text, are dismantling many of these artificial barriers which have prevented Americans with disabilities from enjoying the full rights and privileges of our society.

Yet, the emerging information infrastructure offers a paradox to all Americans, especially the nearly 50 million Americans with disabilities: On one hand, tremendous promise and potential for benefit; on the other hand, further isolation and disenfranchisement. Telecommunications technologies can bring increased independence in access to and use of a tremendous variety of information. However, market forces and expanding technological capability have failed to ensure the design and manufacture of products and services which are fully accessible to and usable by people with disabilities. Information appliances, storage methods and networks are being developed in a way which excludes millions of Americans with disabilities. Furthermore, the extremely high unemployment rate among Americans with disabilities means that affordability is even more critical for this population than for other groups.

To ensure that millions of Americans with disabilities have the capacity to exercise complete and independent control over the information they need to be full participants in society, Congress must pass legislation which directs the entire telecommunications industry to adhere to standards for full access by people with disabilities to telecommunications equipment, networks and services. Likewise, providers of television programming must be directed to provide access to such programs through the use of closed captions and video description. Finally, affordable access by people with disabilities to advanced telecommunications equipment and services must be a priority in the evolving definition of universal service.

Telecommunication policy reform provides Congress the opportunity to ensure that electronic curbcuts are built into the information highway. These curbcuts will provide people with disabilities full, independent and equal access to, and enjoyment of, new information technologies, services and programming. Ultimately, all consumers will benefit from efforts to provide access for consumers with disabilities.

## **Access to Technology for People Who are Blind or Visually Impaired**

**-or-**

### **Why I can't go to an ATM and withdraw funds or set a new microwave oven to cook a potato independently!**

Current data from the US Department of Health and Human Services indicate that 1 person in 20 has significantly impaired vision which cannot be further improved with corrective lenses. This figure translates into approximately 12 million Americans with visual impairments.

Access to information and technology is a great leveler for blind and visually impaired people, allowing them to fully participate in our society. Alternatively, lack of such access creates a technology underclass who will be functionally illiterate in the information explosion.

Accordingly, Congress must establish statutory and regulatory requirements which mandate access to telecommunications equipment and network services by individuals with visual disabilities. Market forces and expanding technological capabilities cannot be relied upon to ensure the design and manufacture of products and services which are fully accessible without this mandate.

The equipment and networks which will become the information infrastructure must offer the potential for output/display of information in multiple and synonymous modes including audio, visual, and tactile; along with choice among operating methods including speech, keypads, point and click mechanisms, simplified interfaces and other activation mechanisms usable by people with various disabilities.

Graphical user interface (GUI) technology coupled with an accelerated and pervasive trend for displaying information in a highly visual format has hampered access to data for blind people. Concerns relate to both personal workstations and public access information systems.

Specific concerns for access include, but are not limited to the following: personal computers and computer networks running on GUI access software; touch keys and touch screens on microwave ovens, stovetops, video recorders, small and large electronic appliances; Automatic Teller Machines; service and information kiosks; building directories; and the like.

**National guidelines or standards to address information access for blind and visually impaired people are needed.** Ultimately, accessibility must become an integral part of all interface designs.

GUIs basically use visual metaphors, for which some blind people lack the necessary frame of reference. Therefore, non-visual alternatives must be developed for recognizing, selecting and pointing to objects on the screen, describing icons, and conveying information portrayed by spatial relationships among various objects to the user.

Current screen reader access programs for GUI-based computers are still in the early stages of development and are not yet able to provide comparable performance or ease of use. **Employment opportunities are being stymied for blind and visually impaired people.**

Although there are a variety of approaches being tested by software developers, consumer groups, governmental agencies, and others, there is a striking lack of coordination between these efforts. Up-to-date reporting on the status of these efforts is difficult to access.

Five major problems which must be resolved before blind computer users will have full access to GUIs include:

- 1) Navigating around the screen;
- 2) Identifying objects on the screen;
- 3) Translating information represented by pictures and graphs;
- 4) Presenting information in a timely manner; and
- 5) Coping with the variety of screen formats.

For further information, contact any of the following individuals:

## **Technology Access Advisory Group**

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Gregg Vanderheiden, University of Wisconsin-Madison, Trace Research & Development Center, Madison, (608-263-5788)

Karen Wolffe, Alliance of and for Visually Impaired Texans, Austin, (512-280-5792)

**Please join us in this effort to promote equal access for individuals who have visual disabilities.** Committee member, Greg Vanderheiden who is affiliated with Trace Research & Development Center at the University of Wisconsin-Madison, has graciously offered to establish and maintain a mailing list of interested parties. He can be reached at: Trace Center, S-151 Waisman Center, 1500 Highland Avenue, Madison, WI 53705-2280; by phone: (608)263-5788 or 262-6966, TDD: 263-5408, or fax: 262-8828; or E-mail: [gcvander@facstaff.wisc.edu](mailto:gcvander@facstaff.wisc.edu). If you would like to discuss the paper or the group's current efforts, please feel free to contact any group member.

(nn: The Technology Access Advisory Group grew out of a working group of rehabilitation practitioners at the 1994 Josephine L. Taylor Leadership Institute. This paper was written by Wolffe, Baldwin, Bird, Dinsmore, Johnson, Moore, Schroeder, and Vanderheiden.)