TRACE CENTER
UNIVERSITY OF WISCONSIN · MADISON

NTIA Broadband Technology Opportunities Program (BTOP)
U.S. Department of Commerce
Washington DC 20230

Docket # 090309298-9299-01

Summary

Thank you for this opportunity to comment on NTIA Broadband Technology Opportunities Program

    We encourage NTIA to consider Americans with disabilities in its Broadband Technology Opportunities Program. In particular, we ask that **people with disabilities be considered as an underserved population**.

    We also ask that the **BTOP and it's RFPs be worded to allow the program to support the development of sustainable national infrastructure projects that provide Internet accessibility across the full range of disabilities** to enable people with disabilities to communicate, learn, and work independently and to avoid a growing digital divide for this significant portion of our population.

I. People with disabilities should be considered an underserved population for the BTOP.

People with disabilities make up a substantial portion of the United States population. Forty-one million Americans, 14.9% of the US population, have hearing, vision, physical, or cognitive disabilities that limit their ability to perform every day activities (Cornell University 2008). For many, this limitation makes it difficult or even impossible to use a normal computer without specialized accessibility technologies.

This population faces a challenge similar to that of rural Americans who lack broadband access - the technology they need to access the Internet is either too expensive or is not available. For example, people who are blind typically need to pay $800+ for screen reading technology in order to be able to use a computer, while people who suffer from multiple impairments may not find any affordable solutions that meet their unique needs.

These Americans with disabilities make up a truly underserved population. Although they are not located in a unique geographic location, they are still a distinct group that is unable to access the same information as its peers. The lack of computing accessibility makes it difficult for individuals in this group to find and maintain jobs in the computer-based economy, and may prevent those with mobility problems from working, learning, and communicating from home. Since 63% of working age Americans with disabilities are not employed, and 24% live in poverty (Cornell University 2008), it is clear that much progress could be made in this area.

II. The BTOP and its RFPs should be worded to allow the program to support the development of sustainable national infrastructure projects that provide Internet accessibility across the full range of disabilities to enable people with disabilities to communicate, learn, and work independently and to avoid a growing digital divide for this significant portion of our population.

A new accessibility infrastructure is necessary to reach the underserved population of Americans with disabilities. The existing market for these products is not sustainable, and faces several challenges that it cannot successfully address without financial support for a new infrastructure.

These challenges include:

1. Providing reliable access as mainstream technology changes. As new ways of presenting information become popular, the technologies that support them must adapt to reliably present this information in a way that is accessible to people with a wide range of disabilities. This constant adaptation of existing software pulls resources from other projects and drives up costs.

2. Providing personalized, consistent access on all Internet-enabled devices, including home computers, mobile devices, and public computers. Most Americans are now able to access information on the go, over the Web, from any location and any computer. Yet the majority of programs for people with disabilities can still only be used on a single computer and are very expensive. Most developers of these programs do not have the resources to expand to mobile devices or to Web-based systems

3. Providing affordable accessibility to consumers with a wide range of disabilities. Due to the challenges listed above and the sheer volume of individual disabilities that must be addressed, costs for creating accessible technologies run high and get passed on to consumers who often cannot afford them.

Although some of the largest providers of accessible technologies will be able to adapt to changing mainstream technologies and continue to succeed, these challenges create barriers that push out small businesses, prevent the best ideas from getting to market, and limit the computer literacy of millions of Americans.

A new, BTOP-funded accessibility infrastructure could address these challenges by creating a Web-based system for developing and distributing accessibility tools nationwide. It would be shared by public and private technology developers alike, providing both free basic access as well as more advanced commercial assistive technologies.

The accessibility infrastructure would:

1. Provide affordable basic accessibility features to those who cannot afford to purchase them, and allow purchase of more advanced commercial technologies at reasonable price

2. Allow libraries across the country, as well as community Internet facilities, to be able to provide access features for a wide range of disabilities on all of their computers – by allowing them to tap into the free access features built into the Internet infrastructure.

3. Allow individuals to use their accessibility features over the Internet anytime, anywhere, rather than being limited to only their home computer.

4. Enable companies to share core features and computer code as needed to develop the most stable and sustainable base system possible, and allow companies to build and sell advanced commercial products based on these core features.

5. Sustain itself as a new marketplace, where customers can purchase and mix-and-match different access features on top of the base system.

After the initial launch and development of this infrastructure, such a system would be self-sustaining through a combination of private donations and the sales of individual accessibility tools built on the base system by different companies. Technical maintenance of basic features would be the responsibility of these companies as well, and they would have incentive to keep these features up to date since they are the basis for their future development of advanced commercial products.

This system could allow millions of Americans with disabilities to catch up to their non-disabled peers in terms of computer literacy. It could also help those with mobility issues to work, learn, and live independently in their own homes, using web-based communication methods that would not be available otherwise.

The technologies to create this infrastructure exist, but have not been brought together. Last year a coalition of groups and companies began organizing to create such an infrastructure. We ask that the language of the competition be such that it can allow submission of a proposal to create the infrastructure to address these needs especially for those with few or no resources themselves for special access technologies. With sufficient funding the initial infrastructure can be substantially completed within 2-3 years.

The development of such a system would clearly align with the BTOP's goals as provided in the American Recovery and Reinvestment Act of 2009 (ARRA).

1. ARRA 6001(b)(2) - It would "*provide access to broadband service to consumers residing in underserved areas of the United States*" by providing access to the underserved population of Americans with disabilities in both rural and urban areas.

2. ARRA 6001(b)(5) and 6001(g)(4) - It would "*stimulate the demand for broadband, economic growth, and job creation*" and "*facilitate access to broadband service by low-income, unemployed, aged, and otherwise vulnerable populations in order to provide educational and employment opportunities to members of such populations*" by reducing barriers for small businesses developing accessibility products and allowing more people with disabilities or aging-related mobility issues to work, communicate, and learn from home over broadband connections.

Thank you for your time and your concern for providing Internet broadband access to this and other underserved populations of Americans.

Sincerely yours,

Gregg C. Vanderheiden, Ph.D.
Director, Trace Center
Professor, Industrial Engineering and
  Biomedical Engineering Departments

Sources

"American Recovery and Reinvestment Act of 2009." 2009.
http://www.whitehouse.gov/the_press_office/ARRA_public_review/.

Cornell University. "2007 Disability Status Report: United States." 2008.
http://www.ilr.cornell.edu/edi/disabilitystatistics/StatusReports/2007-PDF/2007-
StatusReport_US.pdf.