



**Before the
Federal Communications Commission
Washington, D.C. 2055**

In the Matter of)
)
A National Broadband Plan) GN Docket No. 09-51
for Our Future)

**COMMENTS OF
THE COALITION OF ORGANIZATIONS FOR ACCESSIBLE TECHNOLOGY**

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SUMMARY

The Commission should ensure that its national broadband plan fosters access for the millions of Americans who are deaf, blind, hard of hearing, low vision, deaf-blind, or have a speech disability (the “target population”), and should craft a broadband plan that seeks to eliminate the broadband divide between the target population and the general population. Specifically, the Commission should define broadband so that technologies used by members of the target population will be supported. In addition, the Commission should develop methods to gather accurate and comprehensive data on the target population, including the broadband penetration rate and the reasons for lack of broadband subscribership among the target population. With this information in hand, the Commission should design a plan that seeks to ensure that all members of the target population have access to broadband in a manner that is effective, accessible, and affordable, and explore ways to maximize broadband utilization within the target population.

In order to ensure the affordability of broadband, the Commission should modify the federal Low-Income Universal Service Fund program to allow people with disabilities to use Lifeline and Link-up subsidies to reduce the costs of broadband service and equipment. In addition, the Commission should adopt rules and policies designed to ensure full access to broadband services and equipment by promoting the development of universally designed broadband products and services that are accessible to the largest population, regardless of their functional limitations.

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The Coalition of Organizations for Accessible Technology (“COAT”)¹ hereby submits its comments in response to the Notice of Inquiry issued by the Federal Communications Commission (“FCC” or “Commission”) concerning the development of a national broadband plan.² COAT supports the Commission’s efforts to develop a broadband plan and urges the Commission, in doing so, to assign paramount importance to addressing the particular broadband needs of the millions of Americans who are deaf, blind, hard of hearing, low vision, deaf-blind, or who have a speech disability (hereinafter referred to as the “target population”).

I. INTRODUCTION

COAT applauds the Commission’s efforts to develop a national broadband plan with the goal of ensuring that every American citizen and business has access to robust broadband services. During the course of developing this plan, the Commission will consider a myriad of

¹ COAT consists of over 235 national and local organizations that advocate for full access by people with disabilities to evolving high speed broadband, wireless and other Internet protocol technologies. More information about COAT is available at <<http://www.COATaccess.org>>.

² *A National Broadband Plan*, GN Docket No. 09-51, Notice of Inquiry, FCC 09-31, 24 FCC Rcd 4342 (2009) (“Notice”).

factors and proposals and will contemplate the effect of its policies on many different communities within the United States. As it proceeds with this important undertaking, the Commission should make every effort to effectuate the principles of both the Americans with Disabilities Act (ADA) and Section 255 of the Communications Act in the broadband era. Each of these statutes evidenced Congress's strong intent for people with disabilities to have the same opportunities to benefit from new and innovative communication technologies as their nondisabled peers and colleagues. COAT strongly urges the Commission to maintain an unwavering focus on the effects of its policies on the target population and to commit the necessary resources to ensure that robust broadband services are meaningfully available to the target population.

According to a 2007 National Health Interview Study, 33.3 million adults experience difficulty hearing and 22.4 million adults experience significant vision loss.³ The number of deaf-blind individuals in the United States is estimated at 42,000 to 700,000.⁴ An estimated 2.6 million people have difficulty speaking, with 610,000 of these individuals reporting this difficulty as severe.⁵ Although it has been almost twenty years since the passage of the ADA

³ Centers for Disease Control and Prevention, Summary Health Statistics for U.S. Adults: National Health Interview Survey, 2007, at Table 11 (Noninstitutionalized Adults), *available at*: <<http://www.cdc.gov/nchs/fastats/disable.htm>>.

⁴ Turkington, Carol, and Allen E. Sussman, eds. (2000), *The Encyclopedia of Deafness and Hearing Disorders*, second edition, New York: Facts on File, Inc., p. 62, *cited at*: <http://library.gallaudet.edu/Library/Research_Help/Deaf_Research_Help/Frequently_Asked_Questions/Statistics_on_Deafness/Deaf-Blind_in_the_US.html> . Statistics on deaf-blind Americans vary widely, depending on the level of hearing and vision loss included within the estimates for this population.

⁵ Erika Steinmetz, *Current Population Reports in Americans With Disabilities: 2002, Household Economic Studies*, U.S. Census Bureau, Table 2 (issued May 2006), *available at*: <<http://www.census.gov/prod/2006pubs/p70-107.pdf>>

and well over a decade after passage of Section 255, access to functionally equivalent communications for these Americans continues to lag.

II. AN UNDERSERVED POPULATION

Broadband usage rates are much lower among the target population than among the general population.⁶ For example, a 2003 study showed that fewer than 30% of people with disabilities over the age of 15 had access to the Internet, compared to more than 60% of people without disabilities. Also, people with disabilities in both metropolitan and non-metropolitan areas historically have had lower rates of Internet use than their geographic counterparts with no disability, with non-metropolitan people with disabilities having the lowest rate of Internet use. For example, in one study, only 26.7% of people with disabilities in non-metropolitan areas had Internet access.⁷ While recent years have witnessed some increases in the penetration rates for this population, such increases are always at a far lower level and a slower pace than for people without disabilities. The federal government itself has recognized these discrepancies. For example, in its Second Report on broadband access, the FCC identified persons with disabilities as a category of Americans “who are particularly vulnerable to not having access to advanced services.”⁸ Again in its Third Report assessing the deployment of high speed services, the

⁶ See Statement of the Coalition of Organizations for Accessible Technology, “Roundtable on Underserved Areas and Reaching Vulnerable Populations,” National Telecommunications and Information Administration, U.S. Department of Commerce, March 19, 2009, *available at*: <http://www.coataccess.org/files/NTIA_2009/NTIA_Richert.doc>.

⁷ Enders, Alexandra. “Ruralfacts: Disability and the Digital Divide: Comparing Surveys with Disability Data.” Research and Training Center on Disability in Rural Communities, The University of Montana Rural Institute, Missoula, MT. June 2006, at <http://rtc.ruralinstitute.umt.edu/TelCom/Divide.htm>. See also Dobransky, Kerry and Hargittai, Eszter. “The Disability Divide in Internet Access and Use.” *Information, Communication and Society*. 9(3):313-334. June 2006 at <http://eszter.com/research/a18-disabilitydivide.html>.

⁸ *Deployment of Advanced Telecommunications Capability to all Americans in a Reasonable and Timely Fashion, Second Report*, CC Dkt. No. 98-146, 15 FCC Rcd 20913 (2000) at ¶234.

Commission acknowledged that individuals with disabilities may face “significant impediments” with respect to gaining access to broadband services.⁹

There are a number of possible reasons for the discrepancy in Internet use between the general population and people with disabilities. These are:

1. Greater Unemployment and Lower Incomes

Recent Bureau of Labor statistics show that in February 2009, the unemployment rate of individuals with disabilities was 14%, compared with 8.7% for persons with no disability.¹⁰

Other research shows that people with disabilities who work full-time earn less than their counterparts. In 2007, the median annual earnings of full-time working-aged Americans with disabilities was approximately \$34,000, compared to \$41,000 for people without disabilities. A 2004 survey also revealed that the number of people with hearing aids who were not employed increased by 33% since 2000.¹¹ In addition, the poverty rate is much higher for working aged people with disabilities: 24.7% for people with disabilities, compared to 9% for people without disabilities, a difference of almost 16%.¹²

Broadband access can be prohibitively expensive for such individuals with low incomes. In addition, hardware and software needed to make computers and broadband service accessible to people with disabilities can be very costly – and most definitely enough to turn people away from these services. For instance, JAWS or Window Eyes, the two most common screen readers used to enable a person with a vision disability to hear the text or underlying content on a web page, each costs over \$1,000. Installation, maintenance and upkeep add to this cost. Individuals

⁹ *Deployment of Advanced Telecommunications Capability to all Americans in a Reasonable and Timely Fashion*, CC Dkt. No. 98-146, Third Report, FCC 02-33 (2002) at ¶103.

¹⁰ Bureau of Labor Statistics, March 6, 2009, at <http://www.bls.gov/cps/cpsdisability.htm>

¹¹ See Kochkin, S. Ph.D., “MarkeTrak VII: Hearing Loss Population Tops 31 Million People,” The Hearing Review, 16-29 (July 2005)

¹² Erickson & Lee, *supra*, n.2.

who are unemployed or earning meager salaries simply do not have the financial wherewithal to afford broadband service or the specialized equipment needed to access that service.

2. Lower Levels of Education

The reduced level of higher education among people with disabilities may also be a contributing factor to the failure of the target population to have Internet access. In 2007, the percentage of working-aged individuals with disabilities with only a high school diploma (or equivalent) was 35.3%, compared to people without disabilities at 28.1%. Individuals with sensory disabilities, such as blindness or deafness, were the least likely to have such diplomas (only 34.1%);¹³ one could argue that this group stands to benefit the most from having broadband access.

3. Lack of Accessibility Features in the Virtual World

Various physical accessibility barriers also prevent people with disabilities from accessing broadband services. For example, broadband equipment and multi-media applications often require vision and/or hearing to manipulate functions and controls, creating barriers for people who do not have one or both of these senses. Additionally, the proliferation of graphical interfaces and web content that are not accessible to screen readers has created problems for people who are blind or vision impaired. Similarly, website designs that fail to incorporate accepted web accessibility standards can pose difficulties for people with restricted mobility. Finally, when videos posted on the web are not captioned, they remain inaccessible to people who are deaf and hard of hearing.

For individuals who do not have computers in their own homes, finding accessible public computers can also be problematic. Notwithstanding the ADA's accessibility mandates

¹³ *Id.*

for places of public accommodation, such as libraries, community centers, and other locations, to be accessible, often these sites (which provide public Internet access) are not structurally accessible to people with disabilities. Sometimes the buildings themselves lack ramps or elevators that lead to the computer terminals. And even when there is a physically accessible path to the broadband service, these facilities often lack the assistive technology and/or customized configurations needed by people with disabilities

III. BENEFITS OF BROADBAND FOR THE TARGET POPULATION

The low rates of broadband adoption are particularly troubling given how important broadband is to the target population to enjoy functionally equivalent communications. Affordable and accessible broadband service helps to level the playing field for individuals who cannot see, or cannot hear, or cannot easily get around. When the Internet can be accessed via broadband, these individuals are able to participate in the same activities and access the same information as everyone else in the general population. So long as the software and hardware that they are using is accessible, they are no longer set apart from the rest of society.

The following are just a few examples of how broadband services can have unique advantages for people with disabilities:

- Shorter download waiting times that result in increased productivity, especially in employment and education, and that reduce frustration for people with some types of intellectual and mental disabilities.
- An “always on” connection that allows individuals to receive information and obtain support swiftly from innumerable sources at any time of the day. The ability to easily access applications, news, and information from home is especially important for people with severe disabilities, whose mobility limitations may prevent them from traveling.

- Flexible systems that allow accessibility to be built into online information. For example, American Sign Language, captioning and video description can be added to video clips.
- Speed and clarity that enable the use of sign language over video communications. These now permit people who are deaf and who use signing as their primary mode of communication, to communicate naturally either with each other directly or with hearing people through video relay services (for telephone-like communication) and video remote interpreting services (for communication between people in the same location).
- The ability to use other IP-based communication services. These include: (1) IP captioned telephone services, in which people with some hearing loss can both hear and read responses over the Internet from the other party to a telephone call; (2) text-based IP relay services from any portable device that can access the Internet, including cell phones and PDAs; (3) video communication for people with speech disabilities who can augment their communication with visual cues such as facial expressions and gestures; (4) video communication for people with hearing loss who need to read lips and see facial expressions; (5) Internet text chat, used by people with hearing loss both in the work environment and for regular communications with friends and family.

At the same time that access to highly sophisticated broadband applications can transform lives for the better, the lack of access to broadband can perpetuate unemployment, lower incomes, and other problems for the target population.

IV. DEFINING BROADBAND

The first step in developing a national broadband policy must be establishing an adequate definition for broadband capability. As an initial matter, the Commission should modify the definition it ultimately adopts in this proceeding as technological progress warrants, so that its

policies keep pace with commercial realities. Moreover, a broadband definition should apply across technology platforms. The communications technologies utilized by members of the target population, as well as the general population, vary and continually change. The Commission’s definition of broadband should apply in any technological environment that consumers choose for communication.

The Notice seeks comment on how “to ensure that the technical characteristics of current and future broadband networks align with the needs of disabled citizens.”¹⁴ Functionally, the Commission’s definition of broadband, at a minimum, should enable the real-time, two-way transmission of voice and video applications. For example, individuals who use sign language must have access to broadband services at sufficient speeds to be able to conduct video communications. Given that most VRS providers today require a minimum of 256 Kbps, both upstream and downstream, to support VRS, any definition of broadband should require a minimum transmission speed of 256 Kbps in both directions.¹⁵ This would comport with the requirement in Section 225 for the Commission to “ensure that interstate and intrastate telecommunications relay services are available to the extent possible and in the most efficient manner.”¹⁶

V. GATHERING COMPREHENSIVE DATA TO PROMOTE GREATER ACCESS TO BROADBAND

COAT is encouraged by the Commission’s specific request for comment on what it means “for a person with disabilities to ‘have access’ to broadband capabilities.”¹⁷ It has become increasingly clear that the mere commercial availability of broadband service within a person’s

¹⁴ Notice ¶ 28.

¹⁵ See COAT Petition at 8-9.

¹⁶ 47 U.S.C. § 225(b)(1).

¹⁷ Notice ¶ 28.

zip code does not mean that the individual has access to broadband capabilities. As noted above, broadband penetration lags among members of the target population.

As the Commission recognizes, the availability of accurate and comprehensive data is critical to successfully ensuring the national availability of and access to broadband services.¹⁸ The Notice seeks comment on the types of public and private sector data that are not being collected. As the Commission develops its national broadband plan and methods for evaluating the success of its efforts, it should implement measures to remedy the deficiency in available information as to why members of the target population have such low broadband subscription rates.¹⁹

Even the most basic data about the target population is lacking. For example, the estimates on the numbers of Americans who are deaf, blind, hard of hearing, low vision, deaf-blind, and speech disabled vary widely.²⁰ Moreover, there is a paucity of current and reliable data on the number of people in each subset of the target population, where they are located, or their economic status. As noted above, there is evidence to suggest that low incomes may play a significant role in the low rate of broadband subscribership among the target population,²¹ suggesting that issues of affordability must be addressed if broadband penetration within that group is to increase. The lack of specific data, however, makes it difficult to identify and remedy additional reasons for low broadband penetration among the target population.

¹⁸ Notice ¶ 32.

¹⁹ See Letter to Marlene H. Dortch, Secretary, FCC, from the Coalition of Organizations for Accessible Technology, GN Docket No. 09-47 (April 10, 2009) (encouraging the Commission to include questions within its Broadband Data Improvement Act-mandated consumer survey designed explicitly to obtain information about broadband subscribership among the target population).

²⁰ See Section I, *supra*.

²¹ See also COAT Petition at 13-15 (citing research indicating that the expense of broadband deters its adoption among lower income households).

COAT recommends that the broadband mapping process that has begun under the American Recovery and Reinvestment Act of 2009 include the collection of data concerning members of the target population and their access to broadband services. In addition to the basic demographic information, it would be useful to know, on a target population-specific basis, the following information:

- Up-to-date rates of penetration, including whether there are subscribership differentials across geographic areas or between rural and urban residents
- The extent to which various factors, including income, education level and age play a role in determining broadband subscribership
- Identification of the extent to which accessibility barriers impede subscribership, including the extent to which senior citizens fail to adopt or abandon broadband technology as they acquire disabilities
- Identification of applications and services likely to be adopted by people with disabilities (e.g., video telephony for people who are deaf)
- Identification of economic benefits of providing people with disabilities with broadband applications

If the impediments to broadband adoption can be identified through the analysis of comprehensive and accurate data, then the Commission can work toward overcoming those barriers and promoting true access to broadband for members of the target population.

VI. AFFORDABLE BROADBAND SERVICE THROUGH EFFICIENT AND EFFECTIVE MECHANISMS

Affordability is a particularly important component of ensuring broadband access for members of the target population.²² As noted above, members of the target population, on average, earn less and experience lower employment rates than the overall population.

Additionally, broadband is more expensive than basic voice telephone service, which means that members of the target population must pay more for their telephone substitute than other

²² Notice ¶ 53 (seeking comment on who is (and is not) using broadband and on the topic of affordability).

consumers pay for basic telephone service.²³ In measuring “affordability,” the Commission must take into account the differing needs of various communities of interest, including those of the target population for whom lack of affordable broadband is a barrier to access.

The Notice inquires as to effective and efficient options for increasing broadband affordability. Specifically, the Notice seeks comment on whether subsidizing recurring subscription costs of broadband service could resolve barriers to affordability²⁴ and what modifications might be made to the Low-Income Universal Service Fund (“USF”) programs as part of the national broadband plan.²⁵ Although the Low-Income USF programs currently do not support broadband, the Commission already has developed a record that would permit it to implement a pilot program designed to make broadband affordable to low-income consumers.²⁶

COAT strongly recommends modifying the federal Low-Income USF program to include broadband as a supported service. COAT recently proposed a modification to the Low-Income USF program that would allow eligible individuals to use Lifeline and Link Up subsidies for broadband Internet service in lieu of basic voice telephone service.²⁷ For many members of the target population, broadband service is necessary to obtain the functional equivalent of traditional telephone service. Without financial assistance, however, many members of the target population remain unable to afford broadband, due to their lower earnings and the higher price of broadband when compared to basic telephone service.²⁸ COAT’s proposal, if adopted, would help members of the target population with low incomes gain access to communications

²³ See COAT Petition at 11-13.

²⁴ Notice ¶ 54.

²⁵ Notice ¶ 39.

²⁶ Notice ¶ 39.

²⁷ COAT Petition at 18-28.

²⁸ COAT Petition at 10-15.

services that otherwise might be foreclosed due to the cost of a broadband connection. The proposal would be effective and efficient because it would utilize existing mechanisms for deploying broadband, obviating the need to create new, potentially complicated support mechanisms.

VII. MAXIMIZING BROADBAND UTILIZATION

The Notice seeks comment on ways to encourage maximum utilization of the broadband infrastructure within specific communities.²⁹ The low penetration rate of broadband among the target population strongly suggests that the Commission should explore effective deployment, outreach, and training methods to promote maximum broadband utilization by the target population. In addition, the Commission should adopt rules and policies designed to reduce and eliminate accessibility barriers to broadband services and equipment, in accordance with the ADA and other federal nondiscrimination laws. To achieve this, the FCC should draw on its existing authority, as well as support legislative measures, to promote the development of universally designed broadband products and services that ensure redundant means of installing, accessing, interfacing with, and operating broadband features and services, and ensure compatibility with specialized software and adaptive equipment commonly used by people with disabilities to achieve broadband access. Such policies will acknowledge that incorporating accessibility while equipment and services are being designed is far more economical, effective, and efficient than having to engage in expensive and burdensome retrofitting, typically needed in those cases when accessibility needs are ignored at the outset.³⁰

²⁹ Notice ¶ 56.

³⁰ These efforts would also be consistent with the mandate in section 225 of the Communications Act to encourage the use of existing technologies for relay services. 47 U.S.C. § 225(d)(2).

Finally, the American Recovery and Reinvestment Act of 2009 specified that one of the purposes of the Broadband Technology Opportunities Program is to provide broadband education, awareness, training, access, equipment, and support to organizations and agencies to facilitate greater use of broadband service by low-income, unemployed, aged, and otherwise “vulnerable” populations.³¹ Any national broadband plan adopted by the Commission should contemplate that stimulus or other federal funds should be granted to entities working to deploy broadband to the target population. The Commission should evaluate the success of any such entity and should work to find ways to advance additional resources to any successful entity under the new broadband plan. The proven track record of such entities will ensure that they offer an efficient and effective mechanism for promoting broadband deployment on a long-term basis among the target population.

VIII. CONCLUSION

COAT applauds the Commission’s commitment to developing a comprehensive National Broadband Plan and stands ready to collaborate with the relevant agencies and organizations in implementing the plan as quickly and efficiently as possible. In evaluating the options and drafting the broadband plan, the Commission should assign paramount importance to addressing the particular broadband needs of the many Americans who are deaf, blind, hard of hearing, low vision, deaf-blind, or speech disabled.

Respectfully submitted,

On behalf of COAT:

³¹ American Recovery and Reinvestment Act of 2009, Pub. L. No. 111-5, § 6001(b)(3)(B), 123 Stat. 115, 512-13 (2009), codified at 47 U.S.C. § 1305(b)(3)(B).

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Certificate of Service

I hereby certify that on this 8th day of June, 2009, I caused a true and correct copy of the foregoing comments to be mailed by electronic mail to:

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