

The SHLB Coalition

Schools, Health and Libraries Broadband Coalition

Advocating Policies to Bring Affordable, Open, High-Capacity Broadband to Schools, Libraries, Health-Care Providers and Other Community Anchor Institutions Across the Country.

July 29, 2011

Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th St, SW
Washington, D.C. 20554

**Re: Notice of *Ex Parte* presentation in: WC Docket No. 10-90
GN Docket No. 09-51
WC Docket No. 05-337**

Dear Ms. Dortch:

On Monday, July 25, 2011, several members of the Schools, Health and Libraries Broadband Coalition (“SHLB Coalition” or “Coalition”) met with Carol Matthey, Amy Bender, Alex Minard, and Amy Beier of the Wireline Competition Bureau. Attending the meeting from the SHLB Coalition were: Larra Clark (American Library Association), Jon Bernstein (Bernstein Strategy, on behalf of CoSN and ISTE), Sarah Morris (New America Foundation), Jim Smith (Davis, Wright, Tremaine, on behalf of National LambdaRail), Bob Bocher (Wisconsin Department of Public Instruction, by phone) and Amina Fazlullah (Benton Foundation, by phone), and the undersigned.

The SHLB Coalition participants encouraged the FCC to address the needs of community anchor institutions, which include schools, libraries, health care providers, for affordable, open, high-capacity broadband connections in rural areas in its Universal Service Fund reform proceeding. The Coalition noted that several parties filed letters in support of the SHLB Comments on this issue, including NATOA, the Benton Foundation, COSLA, CoSN and ISTE, Merit Network, and the Instructional Technology Council. The American Library Association also filed Comments supporting affordable, high-capacity broadband for libraries as community anchor institutions.

In particular, the SHLB Coalition noted that the bandwidth needs of anchor institutions are significantly higher than those of residential users and urged the FCC staff to go beyond the 4 Mbps standard that was set forth as a minimum standard for residential consumers. The SHLB Coalition emphasized that anchor institutions are “multi-user environments” that demand much greater broadband capacity than 4 Mbps. As an example illustrating the needs of libraries

specifically, the Coalition provided a table created by the Kansas State Library (attached) that provides an estimate of the broadband needs of a library depending on the number of workstations at the library. The needs of libraries range up to a high of almost 200 Mbps in the short term, with longer-term needs of 1 Gbps. Other anchor institutions, including hospitals, may have even higher bandwidth needs. Additional materials and discussion points discussed are included in the attachment.

Sincerely,

A handwritten signature in black ink that reads "John Windhausen, Jr." with a stylized flourish at the end.

John Windhausen, Jr.

Coordinator

Schools, Health and Libraries Broadband (SHLB) Coalition

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cc: Carol Matthey
Alex Minard
Amy Bender
Amy Beier

SHLB Coalition Recommendations
High-Cost Fund/Connect America Fund Reform
July 25, 2011

- The revised High Cost Fund/Connect America Fund should ensure that community anchor institutions (schools, health providers, libraries, public media, public safety and others) are provided open, affordable high-capacity broadband. The recipients of funding in rural areas should be obligated to serve anchor institutions as well as residential consumers.
- Anchor institutions increasingly need high-bandwidth solutions to keep up with changes in technology and the market. Examples:
 - Schools are experiencing dramatic increases in broadband connections as educational materials are provided via “cloud computing”. Furthermore, schools are required to adopt digital testing by 2014, which will require more bandwidth.
 - Libraries are increasingly used for job-training, medical research, distance education, etc. Usage of libraries has increased substantially during the economic recession.
 - Health care providers are transitioning to electronic medical records and telemedicine options that require much more bandwidth. Furthermore, the explosion of mobile e-health services requires hospitals and health clinics to have enough capacity to handle hundreds of patients sending e-health/health monitoring information to the health center.
- USF funds are collected from the general public through their telephone bills. Such public funds should be used for institutions that are dedicated to serving the general public – community anchor institutions.
- Additional research demonstrates anchor institutions’ needs for more broadband, especially in rural areas:
- The ALA Public Library Funding and Technology Access Study was released in June, 2011 with some important results:
 - 56.7% of rural libraries have connections that are less than 3 Mbps (download)
 - A majority (65.6 percent) of urban library outlets have fiber optic connections, as compared to 42.8 percent of suburban outlets, and only 21.8 percent of rural outlets.

- Adequate connection speeds were reported by 54.6 percent of public libraries, with the greatest improvements reported by urban libraries (55 percent, up from 47.6 percent last year). Unfortunately, suburban (56.7 percent) and rural (53.1 percent) libraries reported slight decreases in the adequacy of connection speeds (down from 57.9 and 54.3, respectively).¹
- The study also showed that the principal reasons that rural libraries do not have adequate broadband coverage are because of the price and the lack of availability.

Increasing Adequacy of Connections	Urban	Suburban	Rural	Overall
No, the connection speed is already at the maximum level available	10.9%	14.7%	25.5%	19.4%
Yes, there is interest in increasing the outlet's bandwidth, but the library cannot currently afford to do so	26.5%	29.8%	30.1%	29.4%

- Anchor institutions vary a lot in their broadband needs, depending on their size and services. It is impossible to pick a single specific standard for anchor institutions.
- Nevertheless there are some benchmarks that can provide some guidance to the amount of bandwidth needed based on the number of simultaneous user devices (i.e. computer workstations or laptop computers).
 - The State Library of Kansas, working with their Regional Library Systems, has developed a Broadband Capacity Planning tool that looks at both the number of broadband connected devices and the specific applications or use-models for those devices. KSL developed the following model to estimate the amount of broadband capacity needed at a library depending upon the number of workstations.
 - This model was developed based on a mixed application pattern and attention to evolving library branches from current connections towards more optimal connections in the short and long term.

¹ "Public Library Funding and Technology Access Study, 2010-2011," American Library Association and University of Maryland, June 21, 2011, http://www.ala.org/ala/research/initiatives/plftas/2010_2011/plftas11-techlandscape.pdf, page 32

Broadband Allocation (Downstream+Upstream) in
Megabytes per Second (Mbps)

Total Number of Internet Computers (staff and public)	Minimum	Short Range Optimum	Long Range (2020)
	>200	144.0	172.8
151-200	72.0	86.4	≥1,000
101-150	64.8	77.8	≥1,000
56-100	43.2	51.8	≥1,000
41-55	23.8	28.5	≥1,000
26-40	17.3	20.7	≥1,000
16-25	13.8	16.6	≥1,000
11-15	8.3	10.0	≥1,000
6-10	5.5	6.6	≥1,000
1-5	3.0	4.3	≥1,000

- According to the 2007 National Digital Schools survey, the need for broadband connectivity in schools will increase more than 7 times by the year 2011.
- Including anchor institutions does not necessarily require additional funding if the needs of anchor institutions are included up-front in the design of the broadband network. Anchors can be used as the locations of the high-capacity hubs (which need to be built anyway to aggregate residential traffic).
- Building open, high-capacity broadband networks to anchor institutions was one of the principal goals of the Broadband Technology Opportunities Program. This program will address approximately 10-15% of anchor institutions, which means that much more work needs to be done. The National Broadband Plan calls for 1 Gbps to anchors - the FCC will be remiss if it ignores this goal in this proceeding.

- There are a variety of ways to supervise a requirement that recipients of High-Cost Fund/Connect America Fund funding should provide anchor institutions with sufficient open, affordable, high-capacity bandwidth, such as,
 - * an annual ascertainment, certification, and/or reporting requirement by the recipient of funding that it is providing affordable high-capacity broadband service to all anchors in its community;
 - * allow anchor institutions in the rural area to file information with the FCC about its broadband needs that the recipient of funding must accommodate;
 - * impose a 3-year time deadline for recipients of funding to build 100 Mbps to all the anchors in its service territory (perhaps with a waiver process for smaller anchors and a 1 Gbps goal for larger anchor institutions).