

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)
)
Inquiry Concerning the Deployment of Advanced)
Telecommunications Capability to All Americans in a) GN Docket No. 11-121
Reasonable and Timely Fashion, and Possible Steps To)
Accelerate Such Deployment Pursuant to Section 706 of the)
Telecommunications Act of 1996, as Amended by the)
Broadband Data Improvement Act)

**Comments of the American Library Association Regarding the
*Eighth Broadband Progress Notice of Inquiry***

The American Library Association (ALA) – the world’s oldest and largest library association, representing over 61,000 members – is pleased to provide comments in response to the Federal Communications Commission’s (FCC) Eighth Broadband and Progress Notice of Inquiry. Paragraph 17 in the NOI requests comments on evaluating the adequacy of library bandwidth, and our comments below focus on this question.

Public libraries are quintessential community anchor institutions (CAIs). They are a critical community hub and a key player in the 21st century’s knowledge-based economy. The nation’s 16,671 public libraries serve everyone, and each week 29 million people visit their local public library for a variety of purposes, including access to online resources via the library’s Internet connection. And in a large majority of communities (67 percent) the library is the only source of no-fee access to computers and the Internet. In 2009, nearly one-third of Americans age 14 or older—roughly 77 million people—connected to the Internet through their public libraries.¹

The impact of the Internet and related issues like broadband connectivity has been well documented in surveys the library community has conducted since 1994.² At that time, just 13 percent of the nation’s public libraries offered public Internet access, often just a dial-up connection to one or two workstations. Today over 99 percent of public libraries provide access to the Internet, almost all via a broadband connection, to an average of 16 public Internet

¹ Opportunity for All: How the American Public Benefits from Internet Access at U.S. Libraries,” <http://www.ims.gov/pdf/OpportunityForAll.pdf>, Institute of Museum and Library Services, 2010.

² The American Library Association (ALA) and other organizations have helped conduct these surveys, which are linked at <http://www.ala.org/ala/research/initiatives/plftas/previousstudies/index.cfm>.

workstations.³ Therefore, the issue for libraries—like many community anchor institutions—is not Internet access and broadband connectivity, per se. Rather, it is providing an acceptable and affordable level of connectivity as the demands of Internet-based services, applications and users skyrocket.

As the FCC notes in its NOI, 80 percent of schools and libraries believe that their broadband connections do not meet their needs. Public library reports of insufficient bandwidth also are confirmed in research conducted by the ALA and the Information Policy and Access Center at the University of Maryland.⁴ Libraries have unique needs for high-capacity bandwidth that are different from those of residential consumers. Library broadband is frequently at peak capacity with multiple users simultaneously accessing a range of Internet services via public Internet computers and wireless connections supported by a single Internet connection – often with staff technologies sharing the same connection.

The ALA urges the FCC to consider this multi-user environment of public libraries when evaluating the adequacy of broadband connectivity for libraries.

Demand for High-Capacity Broadband in Libraries Grows

Data from the most recent Public Library Funding & Technology Access Study survey were collected in fall 2010 and published in June 2011.⁵ The study documents several key factors that impact library bandwidth.

- *More Internet connected workstations and greater public use.* In 2010 public libraries reported an average of 16 public access workstations. This is a significant increase from just 11 workstations reported in 2008. Furthermore, 70 percent of libraries report that patron use of the library's Internet workstations has increased in the past year.
- *Cloud-based resources and services.* Over the past decade, there has been a steady increase in patrons accessing information over the Internet. For example, 60 percent of public libraries offered access to online periodical and reference databases in 2000. In the latest survey, this figure has increased to 95 percent. Many of these databases offer the full-text of articles, including images which often results in large downloads placing more pressure on limited bandwidth.

Integrated library systems (ILS), which include such core library functions as the online catalog and automated circulation, also impact broadband sufficiency. Almost all ILS vendors now offer the option to host the library's ILS. This can be an attractive option but it is only viable if there is bandwidth to support it. In addition, because of the time-sensitive nature of some ILS transactions, it is important to have not just adequate

³ The 2002 survey was the last one to ask about dial-access, and responses at that time indicated that 6.5 percent of libraries still had dial access.

⁴ <http://ipac.umd.edu/>

⁵ http://www.ala.org/ala/research/initiatives/plftas/2010_2011/index.cfm

bandwidth but high-quality bandwidth (e.g., low latency) and the technical knowledge to manage it. For libraries that do host their own ILS, website or other content, adequate synchronous bandwidth is essential.

- *Changing patron needs.* High-bandwidth applications like Skype and videoconferencing and services like YouTube are popular with patrons, but these sites require considerably more bandwidth than static, text-only websites. Several patrons engaged in interactive videoconferencing can saturate a 1.5Mbps broadband circuit – impacting not only the quality of the video but all other public Internet users, too. As user-generated content creation and sharing through social media continues to expand, upload speeds also increasingly need to match download speeds.
- *Wireless Internet access.* In the latest ALA survey, 86 percent of libraries offer wireless Internet access compared to just 29 percent in 2005. Wireless access is a very popular service, but it places additional pressure on the library’s limited broadband circuit because in 80 percent of libraries the wireless access shares the same bandwidth as the library’s wired workstations.

An Indiana public library director describes the evolving technology landscape succinctly, “At one time, we would have said a T1 was just the world, but it just changes too fast. We went from a T1 to two T1s to three T1s to now 15 Mbps of fiber.”⁶

At a state level, Maine and Idaho also illustrate this trend. As noted in comments from the Schools, Health and Libraries Broadband (SHLB) Coalition, Maine schools and libraries are now increasing their bandwidth to 10 and 20 Mbps after the state recommended roughly 3 Mbps connections only two years ago. In Idaho, 32 public libraries have been provided with an upgraded broadband connection of about 11 Mbps per library in order to implement a Broadband Technology Opportunities Program (BTOP) Public Computing Center grant.⁷

Public Libraries Do Not Have the Broadband That They Need

Public libraries – often with support from the vitally important E-rate program – have steadily improved Internet connections over the past several years. The latest survey shows that 60 percent of libraries now have connections greater than 1.5 Mbps. In 2005, this was true for only 29 percent of libraries. While progress has been made, it is tempered by another revealing statistic:

- In 2005: 53.5 percent of libraries reported their bandwidth was sufficient.
- In 2010: 54.6 percent of libraries reported their bandwidth was sufficient.

⁶ American Library Association. Libraries Connect Communities: Public Library Funding & Technology Access Study 2008-2009, September 2009.

⁷ <http://fjallfoss.fcc.gov/ecfs/document/view?id=7021705458>

Therefore, while bandwidth increased from 2005-2010, the number of libraries reporting that their bandwidth—regardless of speed—is sufficient to meet staff and patron needs has shown almost no improvement. This also is reflected in the 2010 E-rate Program and Broadband Usage Survey, which found that 62 percent of surveyed libraries stated that their bandwidth was not sufficient.⁸

Two key findings from the survey help to illustrate library broadband issues.

- *Adequate bandwidth:* 19.4 percent of libraries report that the speed of their broadband connection is the maximum available. Some of this limitation is likely because over half (52.6 percent) of libraries still get their broadband via copper circuits. As libraries reach the limited capacity of copper, they will need to transition to fiber. But the costs for fiber connectivity may be more than a broadband provider wants to invest or the library can currently afford.
- *Affordable bandwidth:* 29.4 percent of libraries report they want to increase their bandwidth but cannot afford to do so. In the previous year's survey only 23 percent of libraries had affordability issues. This percentage increase shows the impact of the current recession, which has led to reduced library funding while patron demand for library technology resources has escalated.

While programs like the E-rate have been instrumental in helping address library broadband needs, more work still needs to be done to meet the evolving technology needs of our communities. We ask that as the FCC considers reforms of the *High Cost Fund* and undertakes other initiatives targeted at addressing broadband issues, that libraries be a key part of these reforms and initiatives.⁹

Finally, we ask that the FCC recognize the multi-user environment of libraries as it moves forward with these initiatives and works toward the goal of 1 Gbps connections for community anchor institutions set forth in the National Broadband Plan.¹⁰

Respectfully submitted by,



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⁸ 2010 E-rate Program and Broadband Usage Survey: Report. DA 10-2414. P. 8.

(http://transition.fcc.gov/010511_Eratereport.pdf)

⁹ <http://fjallfoss.fcc.gov/ecfs/document/view?id=7021239757>

¹⁰ National Broadband Plan: Connecting America," page 10.