

**Before The Federal Communications Commission
Washington, D.C.**

In the Matter of)	
)	
International Comparison and Survey)	GN Docket No. 09-47
Requirements In the Broadband Data)	
Improvement Act)	
)	
Inquiry Concerning the Deployment of)	GN Docket No. 09-137
Advanced Telecommunications Capability to All)	
Americans In a Reasonable and Timely)	
Fashion....)	
)	
A National Broadband Plan for Our Future)	GN Docket No. 09-51
)	
Schools and Libraries Universal Support)	CC Docket No. 02-6
Mechanism)	
)	
In the Matter of Comprehensive Review of)	WC Docket No. 05-195
Universal Service Fund Management,)	
Administration, and Oversight)	

Comments — NBP PUBLIC NOTICE #15

**Broadband Needs In Education, Including Changes
To E-Rate Program To Improve Broadband Deployment**

**Comments Submitted by the
Wisconsin Department of Public Instruction
(November 20, 2009)**

The Wisconsin Department of Public Instruction is the state’s public school and public library agency. We appreciate the opportunity to offer comments and insights on this issue. Our comments focus specifically on questions related to the E-rate and they are made in the context of the Commission’s work on developing the National Broadband Plan. Regarding the national plan, we think it is critical that sufficient broadband connectivity for community anchor institutions—specifically our schools and libraries—be a key priority in the plan.

E-rate Modifications

11 a: Currently, schools and libraries may obtain discounts on various services that provide highspeed access to the Internet as telecommunications and Internet access (priority 1) services.

The proposal to collect more granular data can be achieved with changes to E-rate form 471. For example, the FCC's eight broadband tiers¹ could be included in the form. Some states also maintain data on their school and library connectivity and the Commission should work with state networks and state education and library agencies on this issue.

11 b: When applicants develop their technology plans, what factors do they consider in determining their bandwidth needs?

There are a host of factors that are part of determining bandwidth needs. However, these can be summarized as (1) what networked applications or services will the school or library be using, (2) how much bandwidth can the school or library afford to address the first factor, and (3) can the telecommunication carrier actually provide the level of bandwidth being requested?

11 c: We seek comment on program modifications to maximize the use of broadband connections that are subsidized by the E-rate program.

The Commission specifically asks about possibly extending the community access it allowed in its 2001 *Alaska Order*. That order was specifically targeted at that state and most of the conditions there are not found in most other areas of the country.² However, many school facilities, from a broadband access perspective, are underutilized once classroom instruction ends in late afternoon. Therefore, regardless of local broadband availability, we think the Commission should affirm that schools can be open during non-instruction times to provide Internet access to the general public. Because of a variety of issues (budgets, staffing, building and network security, etc.) we do not think many schools will avail themselves of this opportunity, but they should have the option. Public libraries obviously provide public access

¹ Development of Nationwide Broadband Data to Evaluate Reasonable and Timely Deployment of Advanced Services to All Americans.... WC Docket No. 07-38. Released June 12, 2008.
http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-08-89A1.pdf

² Some of the specific restrictions in the Alaska Order, like a community not having any local Internet access, are no longer applicable. We are proposing that schools simply be given the option to be open in off-classroom hours for public Internet access.

too. However, libraries in many smaller communities are not always open in the evening and allowing the school to be open for Internet access is one way to address this community need. In fact, we hope that the local school and library will coordinate their hours so that the school can be open on evenings when the library is closed.

11 d. We seek comment on any legislative changes that would expand the classes of eligible users.

Before expanding the class of eligible users, the first priority must be to ensure adequate funding to meet the needs of current eligible users. Each year there are consistently more funds requested than the \$2.25 billion available. For example, the demand in 2009 was for \$3.99 billion and the demand in 2008 was \$4.3 billion.³ In 2009 only 5% of our state's school districts even applied for Priority 2 (internal connection) discounts. We think if every school desiring Priority 2 discounts actually applied, the demand would likely more than double.

11 e. To what extent does the fact that the E-rate program does not currently fund computers and other end user equipment inhibit the use of broadband by schools and libraries?

We do not think that lack of E-rate discounts for end user equipment or staff development in any manner inhibits the use of broadband. Similar to our concerns stated in question 11d above, before the Commission considers expanding the number of eligible services, it needs to first ensure adequate funding to meet applicant demands for current eligible services. Because of the funding limitations referenced above, only the very high (generally above 80%) discount applicants get any discounts for internal connections. Expanding eligibility to end user workstations and staff development will only exacerbate this issue.

11 f: Currently, WANs are not eligible for support.

We think that the most cost effective method of providing WAN service and connectivity to our schools and libraries should be eligible for support.

³ Demand letter to the FCC from Mel Blackwell, Vice President, Schools and Libraries Division, March 10, 2009. <http://www.usac.org/res/documents/sl/pdf/sl-demand-estimate-2009.pdf>.

11 g: Are there any programmatic rules and policies that have the effect of deterring requests for broadband funding?

The need for libraries (and schools) to comply with the filtering requirements under the Children’s Internet Protection Act (CIPA) has resulted in some libraries not applying for discounts on their Internet service. But CIPA compliance does not deter requests for broadband funding. Much more of a deterrent are the bewildering and voluminous rules and regulations that applicants must follow to get funding for broadband or any other eligible services. In March 2002, our department filed comments with the Commission on the needless complexity of the program.⁴ Over seven years later our comments still resonate and the issues we identified still exist. In June 2005 the Commission issued an NPRM seeking comments on major reforms to the program.⁵ Many organizations, including our department, the American Library Association and the State E-rate Coordinators Alliance offered substantive recommendations for fundamental program changes, including issues related to technology plans. The Commission never acted upon these recommendations. We suggest the Commission refresh the record on this issue with the intent to actually make meaningful reforms to the program.

E-Rate Disbursement

12 a: One possible modification would be to create a new priority level for schools and libraries that do not have broadband or that have extremely slow Internet speeds to permit those entities to receive funding in advance of other eligible requests, which could enable such entities to “catch up....”

A very high percentage of our schools⁶ and libraries⁷ already have broadband connectivity, but they often lack sufficient connectivity. We are concerned that any new priority for schools and libraries based on their current bandwidth, or providing increased E-rate discounts to attain certain levels of connectivity, will be difficult to administer and likely increase the level of

⁴ CC Docket No. 02-6. Comments filed by the Wisconsin Department of Public Instruction. March 29, 2002. <http://fjallfoss.fcc.gov/ecfs2/document/view?id=6513084380>

⁵ FCC Launches Broad Inquiry Into Management and Oversight of Universal Service Fund. June 14, 2005. http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-259330A1.pdf

⁶ *Internet Access in U.S. Public Schools and Classrooms: 1994-2005*, U.S.

Department of Education, NCES. November 2006. <http://nces.ed.gov/pubs2007/2007020.pdf>.

⁷ *Libraries Connect Communities: Public Library Funding & Technology Access Study 2008–2009*. http://www.ala.org/ala/research/initiatives/plftas/2008_2009/index.cfm

program complexity. These cautions notwithstanding, we encourage the Commission to work with state education and library agencies to identify those schools and libraries with low connectivity and work to address the issue.

12 b: Currently, the program’s funding varies for applicants based on the number of their students who qualify for free or reduced lunch and based on their geographic location....

We see no need to recalculate the discount levels to factor in whether a school or library lacks broadband services. As noted above, very few applicants lack such service and nothing in the current program—except maybe its complexity—prevents them from applying now.

Regarding schools and libraries which have not received funding for internal connections (Priority 2), we *strongly support* program changes to allow the great majority of applicants that have not received these discounts to do so. As noted in 11d above, for 2009 only 5% of our state’s school districts bother to apply for Priority 2 discounts. Even with the 2-in-5-year funding rule and the use of rollover funds, most applicants below the 75-80% discount level have no chance of getting funds for internal connections. Lacking a dramatic increase in the fund, we advocate for a rule change to allow schools and libraries with lower discounts to get Priority 2 funding. Related to the discount level, we encourage the FCC to update its rural/urban definitions because they often do not reflect current conditions.

12 c: To what extent have current rules inhibited the development of or expansion of existing state, regional or local broadband networks? Are there changes to the Commission’s rules that would facilitate these types of networks?

Wisconsin and many other states have statewide networks and apply for E-rate discounts for hundreds of schools and libraries which are on these networks. Most of these state applications are based on multi-year contracts. Yet each year, state network staff are required by the E-rate’s application review process to answer the same questions in relation to the network’s 471 application form. One of the simplest, and yet extremely helpful rule changes, would be to allow the Form 471 to be filed once for multi-year contracts (an evergreen 471). This suggestion is not new and has been made by many organizations, including our department.⁸ We know that

⁸ CC Docket No. 02-6. Comments filed by the Wisconsin Department of Public Instruction. March 10, 2004. <http://fjallfoss.fcc.gov/ecfs2/document/view?id=6516082304>

funding beyond the current year cannot be officially committed but that should not preclude the Commission from moving ahead with this suggestion. (For example, USAC could issue a “Preliminary Funding Commitment Decision Letter”.)

12 d: If the Commission established a national broadband goal for schools or libraries, what effect would that have on demand for E-rate funding?

The goal the Commission should set in its National Broadband Plan is to ensure that every school and library has sufficient connectivity that only fiber can provide (see 13c below.) This will likely increase the demand for Priority 1 funding to help pay the ongoing costs for the increased bandwidth provided by the fiber. In brief, the current \$2.25 billion must be increased regardless of any national school or library broadband goal (see 13a below).

E-rate Funding

As stated in 12d above, we encourage the Commission to make fiber connectivity to our schools and libraries a national broadband goal. With increasing broadband demands to meet the needs of bandwidth intensive applications and information resources (e.g., multi-media applications and the evolving Web 2.0 environment), the great majority of our schools and libraries will soon need the bandwidth that can only be provided via fiber.

13 a: To what extent does the annual E-rate funding cap of \$2.25 billion limit the extent of broadband deployment by eligible schools and libraries?

The original \$2.25 billion was based on estimates that are now at least fourteen years old.⁹ The fact that the program consistently receives funding requests far more than \$2.25 billion indicates the erroneous nature of the original estimate. The funding demand for 2009 for Priority One services was \$2.04 billion, close to the \$2.25 billion cap.¹⁰ The cap will likely be exceeded in the next year or two for just Priority One services.

⁹ The cost estimate was based primarily on the 1995 report from McKinsey & Company titled, *Connecting K-12 Schools to the Information Superhighway* (“McKinsey Report”).

¹⁰ We think it likely the only reason Priority One funding has not already exceeded \$2.25 billion is that broadband costs have generally declined over the past decade.

Another factor impacting broadband deployment is that an applicant is at the mercy of the telecommunications provider, and in many small communities there is only one provider. If that provider is unwilling or unable to provide the bandwidth requested by the school or library, they have little recourse. Of interest, in the American Library Association technology survey¹¹, 26% of respondents say their library now has the maximum bandwidth available.

13 b: To the extent the Commission modifies its E-rate rules to encourage additional requests for funding for broadband services under priority 1, how would that change likely impact the availability of funding for priority 2 services?

As noted in our response in 13a, even if the Commission takes no action the \$2.25 billion cap will likely be inadequate to meet Priority One demands in the near future.

13 c: To the extent that commenters believe that providing additional funding above the current cap would advance broadband deployment, we seek comment on what additional amounts would be needed to achieve specific levels of broadband connectivity. Commenters should identify all assumptions regarding their dollar estimates.

Comments filed by the Wisconsin Department of Public Instruction on October 28, 2009, for *NBP Public Notice #12, Cost Estimates for Connecting Anchor Institutions To Fiber*¹² showed that an estimate of connecting our public schools and public libraries with fiber was \$5.57 billion.¹³ Assuming an average 85% discount on the \$5.57 billion equals \$4.73 billion; an average of \$1.58 billion over three years. We realize that this figure covers just public schools and public libraries but we present this fiber proposal and its cost to illustrate that a \$1.58 billion federal commitment over a three-year period is a very affordable investment for the benefits that will be realized.

Fiber connectivity also comports well with the statutory language that specifically refers to, “Access to *advanced telecommunications* and information services for all public and nonprofit

¹¹ “Libraries Connect Communities: Public Library Funding & Technology Access Study. Figure C21. 2009. American Library Association.

http://www.ala.org/ala/research/initiatives/plftas/2008_2009/librariesconnectcommunities3.pdf

¹² Comments filed by the Wisconsin Department of Public Instruction. October 28, 2009.

<http://fjallfoss.fcc.gov/ecfs2/document/view?id=7020243769>.

¹³ Based on the school and library numbers provided by the Bill & Melinda Gates Foundation in Public Notice #12, and assuming an average of \$60,000 per site for the 80% (92,800) that do not now have fiber.

http://hraunfoss.fcc.gov/edocs_public/attachmatch/DA-09-2194A1.pdf.

elementary and secondary school classrooms, health care providers, and libraries.”¹⁴ [Emphasis added.] Our department believes that the best way to deploy advanced telecommunications services to our schools and libraries is to make certain that they all have fiber connectivity. To help ensure this, we propose that the Commission use the High Cost fund¹⁵, allocate other funds, or seek new funding sources to bring fiber to our schools and libraries. (Note: Once fiber is installed, we view the E-rate as the key program to then support the ongoing costs of higher bandwidth provided by the fiber.) We suggest the following:

- Allocate sufficient funding over at least a three year period to pay for 80% - 90% of the initial, one-time cost to bring fiber to our schools and libraries (based on level of poverty). States or local schools and libraries will need to fund the remaining 10 - 20%.
- Use the current E-rate discount (20% - 90%) per institution for ongoing cost of the fiber circuit.
- Require the telecommunication providers to participate in the provision of fiber.¹⁶ In areas with competing providers or where schools and libraries are not covered by contracts, require bids using local or state bidding requirements.
- Work directly with state networks, state education and library agencies, and telecommunication providers to determine the actual need for fiber connectivity and possible cost estimates. (The current NTIA state broadband mapping grants can help determine this.)

13 d: The Commission could decrease the discount levels for basic telecommunications, or otherwise modify the existing discount levels, to increase the amount of E-rate funds available for broadband deployment. What would be the effect of such a change?

We support an increase in the current \$2.25 billion to support all E-rate eligible services.

¹⁴ 47 U.S.C. Section 254(h) (2)(A).

¹⁵ Recommended Decision by the Federal-State Joint Board on Universal Service. The Joint Board recommended creation of a Broadband Fund. November 20, 2007. http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-08-22A1.doc. The Commission itself referenced the limitations of the High Cost fund to address broadband needs in its news release of November 18, 2009. http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-294706A1.pdf

¹⁶ Telecommunication providers are now required to participate in the E-rate program. However, they are not required to provide any particular level of broadband service requested by a school or library.

13 e: Would eliminating some of the services currently eligible and expanding eligibility to other services result in greater levels of broadband connectivity?

We do not think implementing our fiber proposal in 13c above requires eliminating some services because we propose to use funding other than the E-rate. We do not support expanding eligibility to other services because we do not think doing so will have a substantive impact on broadband connectivity.

13 f: What other costs not currently covered under the E-rate program would be incurred if schools and libraries could purchase additional broadband capacity? Would schools and libraries have to upgrade personal computer equipment, internal wiring, servers, and other hardware?

It is not likely that personal computers will need to be upgraded. If twisted pair copper wiring (Category 5) is properly installed, it will support 100Base-T Ethernet local networks (100Mbps). For schools or libraries with networks still on legacy 10Base-T LANs, they will need to upgrade switches and related hardware to take advantage of bandwidths substantially over 10Mbps. If they are given at least a three year window to do this, we do not think this is an undue local impediment to our fiber proposal.

13 g: Additionally, we seek comment on suggestions for coordinating with federal or state agencies on grant programs that could supplement the Commission's E-rate program.

We strongly encourage the FFC to work with state networks and state education and library agencies regarding this issue. For example some states, like Wisconsin, have state universal service programs that complement the federal program.

13 h: Alternatively, E-rate funds could be used in conjunction with funds from other entities to support broadband projects. For example, upon a state's recommendation, a particular project might be funded by having the state pay for the computers and training, and providing E-rate discounts for the broadband connection.

As previously stated, we do not think that computers and training are impediments to schools or libraries attaining the broadband they need. We do think that closer cooperation with the state education and library agencies can help address the broadband issues confronting our schools and libraries.

13 i: We seek comment on these suggestions and other ideas to increase the amount of E-rate funds available for broadband technologies, or to more effectively use E-rate funding to improve broadband deployment.

Our two major suggestions center on (1) fundamental E-rate program reform, and (2) making certain that funding a “Fiber to Our Schools and Libraries” program is a top goal in the National Broadband Plan.

Thank you for the opportunity to comment on this important issue.

Sincerely,

A handwritten signature in cursive script that reads "Robert Bocher".

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