

Via ECFS

July 7, 2014

Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, NW
Washington, DC 20554

Re: Ex Parte Presentation, *Modernizing the E-Rate Program for Schools and Libraries*, WC Docket No. 13-184

Dear Ms. Dortch:

This ex parte presentation on updating the Commission's E-rate program for America's schools and libraries for the broadband era is presented by the Technology Education Institute (TEI). Our proposal is to eliminate the archaic regulatory prohibition that currently bars schools, libraries and hospitals (SHL) from including private sector entities in buying consortia designed to help secure access and provide the technical and financial support needed for the ever-expanding and evolving communications, data and content infrastructure that will be an integral part of these public institutions' mission throughout 21st Century.

Problem one: billions spent and little access to show for it. Despite spending billions of dollars in universal service fund (USF) subsidies over more than a decade, America's schools and libraries still face a startling absence of high-capacity broadband services and fiber optic facilities. According to many studies, most notably the ongoing work by Education Superhighway, more than 70% of America's public schools lack sufficient broadband to deliver needed content and connectivity. The vast majority of America's schools have broadband access comparable to the average US home, but their bandwidth requirements are more than 100x greater. With the recent commitment by Chairman Wheeler to devote \$2 billion of E-rate funds to wireless infrastructure in schools and libraries,¹ one can reasonably add another 0 to the figure above for the connectivity gap between what is provided and what is needed for US schools.

As systemic and acute a problem affordable and robust access is for American schools and libraries today, there are three other endemic problems undermining the effectiveness

¹ News Release, *FCC Chairman Wheeler Proposes Landmark E-Rate Modernization to Bring High-Speed Wi-Fi to Every Student and Library*, DOC 32777A1 (rel. June 20, 2014) (Chairman's Wi-Fi Proposal).

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of E-rate, all three can be comfortably handled with the addition of private sector partners to the consortia.²

Problem two: lack of technical expertise. The recent FCC E-rate workshop and a significant number of filings in this docket confirm the startling lack of technical expertise and support in schools and libraries across the country.³ The addition of private sector partners to an SHL buying consortium would provide vitally needed access to technical expertise with real, “on the job” experience implementing the latest technology. Schools and libraries will not only have a technical asset for the present integration of the wireless and fiber communications systems, but the necessary technical expertise for future life cycle developments in ICT infrastructure. It is important to look beyond the current build out, integration and adaption of communications infrastructure and look downstream to what technologies lie ahead; local cloud computer services, edge catching, local M2M peering, smart building systems, etc.

Problem three: lack of pricing transparency. The lack of transparency on broadband access pricing in the current E-rate system is a disgrace, and has lead to well-documented waste and abuse. The Chairman’s Wi-Fi proposal, to its credit, has recognized this.⁴

As the private sector rarely provides such an opportunity for abuse, having them as partners will encourage and promote transparency, open books and third-party auditing. The private sector is not afforded the luxury of being exempt from lawsuits, so there is a significant incentive to act in an open and transparent manner so as to avoid litigation. This is, of course, not the case with government, where waste and fraud often run unchecked. The current E-rate system of billing and payments — in which schools and libraries do not know the price charged for subsidized services and only receive a bill for the balance owed after offsetting USAC disbursements — would never be permitted in private sector transactions. You would have to look back to Longshoreman’s Union contracts and multiple book keeping practices in the 1950s and ‘60s to find billing and

² The Technology Education Institute has worked closely with private firms that build economical, wireless Internet infrastructure in developing and third-world countries, including post-earthquake Haiti. The United States should follow Haiti’s lead. Even remote, rural schools boast robust and affordable broadband, and wireless campuses, in that desperately impoverished nation. United States policy for our schools and libraries must strive to achieve results at least as good as those in Haiti.

³ See, e.g., Reply Comments of the State Educational Technology Directors Association, at 2 (“local school district capacity to negotiate, plan for, deploy, maintain and leverage the benefits of cost-effective, scalable, high-quality broadband to and throughout all schools is uneven”); New Schools Venture Fund ex parte, at 2 (April 21, 2014) (same).

⁴ Chairman’s Wi-Fi Proposal, at 1 (“Increase transparency on how E-rate dollars are spent and on prices charged for E-rate services.”).

payment systems that were less transparent and had more questionable accounting books than the current E-rate system.

Problem four: a significant funding shortfall. The Chairman and the President understood from the beginning that there would be a significant budget shortfall from available USF monies and other funds needed to accomplish their ConnectEd goal of 1G access to 99% of schools and libraries in five years. Indeed, Chairman Wheeler has had to “search under the sofa cushions” just to come up with the \$2 billion announced to fund the initial wireless infrastructure build for public schools and libraries across the country.

President Obama recognized this funding shortfall and the value of public/private partnerships when he announced his ConnectEd initiative back in February, acknowledging the significant financial and in-kind support pledged by private sector companies like Microsoft, Adobe, Apple, Autodesk, and others. Nonetheless, these companies and their charitable contributions are currently barred at the gates from joining existing public sector consortia for E-rate purchasing because the Commission’s rules permit their participation only for “generally tariffed” phone services, not high-speed broadband. 47 C.F.R. § 54.501(c)(1). Consequently, America’s schools cannot form the public-private partnerships for E-rate that in a host of other areas allow the leverage of federal expenditures and reduce the fiscal burden on taxpayers. School and library E-rate consortia would be far more effective, and substantially more efficient, if they were permitted to leverage private sector technical expertise and access demands, supporting volume purchases that would realize savings to the individual school and library members, from companies like the ones noted above who have already invested hundreds of millions of dollars into this effort.

A concrete example of the access problem. To highlight but one example of the huge connectivity gap and opportunity for success if the E-rate system is truly reformed, one need look no further than the FCC’s own backyard. Loudoun County, Virginia, encompasses Ashburn, which is home to: Equinix Global Peering Center that currently handles more than 60% of *all* Internet traffic worldwide (in one of their buildings is a fiber vault that houses the individual feeds of over 230 international carriers); Verizon’s Network Operations Center (NOC); Visa’s NOC; RagingWire; AOL’s Raytheon; and the Latisys collocation center. The list goes on and on, as does the extensive fiber rings that connect all these facilities. In addition to having one of the most important, if not *the* most important pieces of real estate as far as the operation of the global Internet is concerned, with more fiber per square mile than anywhere else, period, you also have in Loudoun Co. rural but affluent horse country and farming with very limited or no broadband Internet access.

The Loudoun Co. public schools have been trying for years to get broadband service for the schools in rural parts of the district, even the very affluent multi-million dollar horse

farm areas, to no avail. They are a poster child of what is a patchwork of broadband access favoring metropolitan and suburban areas, with limited or no high-capacity access available from incumbent carriers in rural communities.

There is abundant fiber. Crisscrossing Loudoun Co. and rural areas across the country is abundant fiber. But to identify and leverage these infrastructure assets effectively you need to work in partnership with the private sector. Working side by side with the public sector in the consortia, private sector firms would help to leverage their assets and technical expertise to identify fiber and private sector clients critically important to lowering the cost of bringing robust broadband capacity to the rural areas of Loudoun County and similar rural areas across the country.

Incumbent carriers and others have documented that 80% or more of America's public schools and libraries are situated within five miles from fiber optic facilities. There is adequate fiber to reach the President's goal of 1G access to 99% of schools and libraries in five years, but we need to allow the private sector to help us reach that goal.

A tragic situation. America's public schools and rural areas face a tragic situation that is in large part a direct result of incumbent Local Exchange Carriers (LECs) not providing the fiber and bandwidth, at affordable prices, necessary for high-speed Internet access to schools, hospitals and libraries in lots or locations, including those where one would expect top-notch connectivity. The current E-rate program exacerbates this problem because it was designed more than 15 years ago to support advanced services that, over time, have become "legacy technology" — largely obsolete communications technologies currently being sought by museums for their collections. As Commissioner Pai has pointedly observed, "[t]he E-rate program prioritizes things like telephone service over connecting classrooms to the Internet, whether by wires or Wi-Fi."⁵ The current E-rate restrictions and incumbent carriers who have built their revenue models on monopoly rents procured from POTS are to a large degree responsible for holding back SHL connectivity in the broadband era.

Public-Private partnerships are the answer to each of these E-rate problems.

Expanding permitted school and library buying consortia will solve the budget, technical support, access, transparency, and accountability challenges identified above and by the overwhelming majority of comments to the Commission.⁶ *First*, the rule changes needed

⁵ Remarks of Commr. Pai Before the Federal Communications Barf Association, June 18, 2014, at 2 (DOC 327725A1).

⁶ NCTA and some cable companies oppose expanding availability of SHL consortia on the ground that such groups would make purchases "without due regard to cost" and would "rely exclusively on incumbent local exchange carriers." *See, e.g.*, Bright House Networks ex parte, at 1 (June 26, 2014). For the reasons explained above, these concerns are unsubstantiated and misplaced. If anything, school/library consortia

to allow private-public consortia are straightforward and surprisingly non-complex; they do not conflict with the Act or Commission policy in any way. The record shows a consensus among educators and school district management that consortia are not being widely utilized today, due in part to the complex Commission mechanisms for formation and approval. *See* Education Coalition May 29, 2014 *ex parte*, at 2-3. But there is a more fundamental reason buying consortia are relatively rare in the E-rate sector: the most experienced and best-funded partners, namely technology companies and other private sector entities, are essentially barred from participation except for last century's telephone services. Contrast the Chairman's praise of Urbana-Champaign Big Broadband and iTV-3 in May, saying "[t]his public-private partnership provides a valuable model for communities and companies throughout the country and a demonstration of the creativity that is stimulated when localities are free to work with the private sector to improve broadband offerings."⁷

Second, private sector companies fully understand that broadband Internet access is the lifeblood that fuels the digital platforms on which future advances in education will be made in schools and libraries across. Why should the private sector be denied the opportunity to partner with public agencies to support existing and soon to form consortiums designed to bring 1G + access at affordable prices to schools, libraries and hospitals? Do we not hear often and loudly from every political figure sermons on the virtues of public-private partnerships? Since transparency and technology will ensure that subsidized access is offered only to qualified public institutions, and not to private sector participants, there is no compelling rationale for this prohibition to remain.

Third, the Chairman has already announced he intends to pursue vigorous support of schools and libraries in their efforts to deploy wireless access for broadband Internet access. This is indeed a critically important and necessary task. But, all the wireless access points built in classrooms, hallways, and public spaces in schools and libraries across the country will have to be backhauled by fiber (and lots of it) in order for the wireless networks to function effectively and not be slowed by congestion. Public/private consortia are vitally needed to provide the technical support and revenue stream to ensure that long after the wireless and supporting fiber systems are built, they will be maintained upgraded and kept current with advancements in technology and systems integration.

If the FCC adopts our proposal to authorize private sector partners to participate in public E-rate consortia, outlined below and in the attached mark-up of the current E-rate regulations, then programs like **VICTEC** (the Virginia ICT Education Consortium) will

have an incentive to avoid incumbent LEC services because they have proven to be inadequate, insufficiently available or over-priced, and in many cases all three.

⁷ News Release, *FCC Chairman Tom Wheeler Statement On Urbana-Champaign Big Broadband and iTV-3 Gigabit Services Announcement*, at 1 (rel. May 29, 2014).

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be in a position to help schools, libraries and hospital across Virginia. VICTEC intends to partner initially with both public institutions and private technology companies in a consortium to bring affordable fiber-based broadband access to SHL in rural Loudoun Co. and expand to help other Virginia schools, libraries and hospitals. VICTEC will file with the FCC to become an eligible telecommunications carrier (ECT), allowing it to leverage the buying demands of its members for volume purchases from providers at discount prices, passing the savings along to its E-rate qualified members. VICTEC will have complete transparency in all its pricing and purchasing. VICTEC will open its books to the FCC and for outside independent auditing. VICTEC will provide technical expertise, revenue streams and in-kind contributions. VICTEC will stay with the schools and libraries for the long haul ensuring the ICT infrastructure is maintained, upgraded and keeps expanding with the integration of technology.

To implement this proposal (and as addressed in more detail in Attachment A), TEI recommends that the Commission:

- (a) revise the E-rate program and its underlying regulations so that SHL are allowed **and** encouraged to add private sector firms to their (already permitted but not widely used) buying consortia, gaining needed scale for fiber construction/lease;
- (b) impose pricing transparency obligations on all E-rate provides so that SHL consortia can make more cost-effective buying decisions (In other words, the work of Education Superhighway and others is great, but they should not have to spend so much time and effort just compiling E-rate pricing data.);
- (c) expand the list of “Eligible Services” (47 C.F.R. § 54.502) so E-rate funds can be applied to IT engineering and tech support services, an expertise schools and libraries lack and that private sector partners from the technology community will provide if permitted to join consortia;
- (d) forebear or waive the existing rule prohibiting “resale” of E-rate services for SHL consortia, 47 C.F.R. § 54.513(a), as that ambiguity and potential exposure discourages private companies even from exploring possible participation. Private firms would of course buy services from consortia at market rates, such that the Commission’s parallel anti-subsidization rule protects against improper sales to private firms are discounted E-rate prices.); and
- (e) incentivize schools, libraries and hospitals to form public-private consortia by setting the applicable E-rate discount (47 C.F.R. § 54.505(b)) at the maximum 90% **for broadband services** for all consortia, regardless of location and demographics.

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Please do not hesitate to contact the undersigned if you have any questions about this proposal. Pursuant to Section 1.1206 of the Commission's Rules, this ex parte letter is being filed electronically.

Respectfully submitted,

/s/ Garland McCoy
Garland T. McCoy, President
Technology Education Institute
(gmccoy@technologyeducationinstitute.org)

Attachment

cc: Chairman Tom Wheeler
Commissioner Jessica Rosenworcel
Commissioner Mignon Clyburn
Commissioner Ajit Pai
Commissioner Michael O'Reilly
Phil Verveer
Patrick Halley
David Strickland
Lisa Hone
Nicholas Alexander
Jon Wilkins
Michael Steffen
Nicolas Degani

ATTACHMENT A

[New language in bold; deleted language struck through.]

47 C.F.R. § 54.501 Eligibility for services provided by telecommunications carriers.

(c) *Consortia*. (1) For purposes of seeking competitive bids for supported services, schools and libraries eligible for support under this subpart may form consortia with other eligible schools and libraries, with health care providers eligible under subpart G, and with public sector (governmental) entities, including, but not limited to, state colleges and state universities, state educational broadcasters, counties, and municipalities, when ordering telecommunications and other supported services under this subpart. ~~With one exception, eligible schools and libraries participating in consortia with ineligible private sector members shall not be eligible for discounts for interstate services under this subpart.~~ A consortium may include ~~ineligible~~ private sector entities **ineligible to receive universal service discounts on supported services** if the pre-discount prices of any services that such consortium receives are at generally ~~tariffed~~ **rates prevailing commercial market rates**.

(2) For consortia, discounts under this subpart shall apply only to the portion of eligible telecommunications and other supported services used by eligible schools and libraries **and may not be extended to private sector members of any such consortium**.

(3) Service providers shall keep and retain records of rates charged to and discounts allowed for eligible schools and libraries—on their own or as part of a consortium. Such records shall be available for public inspection. **Each consortium authorized by this subpart shall maintain its own books and records compiling the price and quantity of supported services used, the service or facility provider(s) offering each such service, and the consortium members utilizing each such service, in addition to the submission of FCC Form 471 to the Administrator under §54.504.**

47 C.F.R. § 54.502 Eligible services.

(a)(2) *Telecommunications*. For purposes of this subpart, supported telecommunications can be provided in whole or in part via fiber, **including dark fiber**, by any entity. **For purpose of these rules, supported telecommunications provided by fiber includes newly constructed fiber facilities and lease or other conveyance of existing fiber facilities to a consortium or eligible telecommunications carrier serving a consortium.**

(3) *Internet access*. For purposes of this subpart, Internet access is as defined in §54.5, **and includes routers, other Internet Protocol network equipment, and servers installed at or near the premises of an eligible school or library.**

...

(5) *Information technology technical support*. Where provided for or on behalf of a school or library consortium, information technology technical support shall be deemed an eligible service if the members of such consortium have available broadband Internet access with a total throughput capacity of at least 100Mbps.

47 C.F.R. § 54.505 Discounts.

(a) *Discount mechanism.* Discounts for eligible schools and libraries shall be set as a percentage discount from the pre-discount price.

(b)(1) For schools and school districts, the level of poverty shall be measured by the percentage of their student enrollment that is eligible for a free or reduced price lunch under the national school lunch program or a federally-approved alternative mechanism. School districts applying for eligible services on behalf of their individual schools may calculate the district-wide percentage of eligible students using a weighted average . **To encourage formation of consortia that include private sector participants, for 2015 and 2016 the discounts available under this subpart to schools and library consortia that were formed or that added private sector participants after July 11, 2014 shall be set at 90% regardless of poverty level.**

47 C.F.R. §54.513 Resale and transfer of services.

(a) *Prohibition on resale.* Eligible supported services provided at a discount under this subpart shall not be sold, resold, or transferred in consideration of money or any other thing of value, except as provided in paragraph (b) of this section. **The sharing of joint equipment or fiber facilities by members of a school or library consortium shall not be considered the sale, resale or transfer of such equipment or facilities.**

...

(c) *Permissible fees.* This prohibition on resale shall not bar schools, school districts, libraries, and library consortia from charging either computer lab fees or fees for classes in how to navigate over the Internet. There is no prohibition on the resale of services that are not purchased pursuant to the discounts provided in this subpart, **including non-discounted services provided to a private sector member of a school or library consortium.**

47 C.F.R. § 54.518 Support for wide area networks.

To the extent that schools, libraries or consortia that include an eligible school or library build or purchase a wide area network to provide telecommunications services, the cost of such wide area networks shall not be eligible for universal service discounts provided under this subpart, **provided that a Wi-Fi network serving areas larger than a school or library's premises, connecting schools or libraries within a district, or offering coverage in residential areas where students or library patrons reside, shall not be prohibited and shall be eligible for universal service discounts.**