

Before the Federal Communications Commission
Washington DC 20554

In the Matter of)
Modernizing the E-Rate Program for Schools) WC Docket No. 13-184
and Libraries)
Report and Order and)
Further Notice of Proposed Rulemaking)

Reply Comments of the International Society for Technology in Education (ISTE®)

I. Introduction

The International Society for Technology in Education (ISTE®) is pleased to provide these reply comments to the Commission’s Order and Further Notice of Proposed Rulemaking¹ (*July Order*) in the E-Rate modernization proceeding. ISTE is the premier non-profit organization for educators and education leaders committed to empowering connected learners in a connected world. As the creator and steward of the definitive educational technology standards, ISTE’s mission is to empower learners to flourish in a connected world by cultivating a passionate professional learning community, linking educators and partners, leveraging knowledge and expertise, advocating for strategic policies, and continually improving learning and teaching. ISTE represents more than 100,000 education leaders, including nearly 20,000 individual members, 79 affiliate organizations and 60 corporations worldwide. ISTE members encompass the entire education spectrum, including teachers, media specialists, technology directors, principals, superintendents, college faculty and more. ISTE’s vision is a world where all learners thrive, achieve and contribute.²

¹ *Modernizing the E-rate Program for Schools and Libraries*, WC Docket 13-184, Report and Order and Further Notice of Proposed Rulemaking (2014) (*July Order*).

² For more information about ISTE, see <https://www.iste.org/about-iste>.

ISTE has been at the forefront of advocacy in support of the E-Rate program for many years and has been an active participant in the current E-Rate modernization proceeding. In addition to submitting comments in response to the E-Rate Modernization NPRM³ and the Public Notice,⁴ individually and as a member of EdLiNC, ISTE collected and submitted comments on behalf of nearly 600 educators hailing from 45 states, D.C., Puerto Rico and the Virgin Islands as well as two petitions with more than 3,000 signatures.

II. Impact of Changes Outlined in the July Order

The *July Order* made several significant structural changes to the E-Rate program. Chief among them were: renaming Priority 1 and Priority 2 as Category 1 and Category 2; immediately eliminating support for several services such as web-hosting and e-mail; phasing out support for voice services (including both POTS and VoIP); and converting the new Category 2 into a per-pupil (or per-square-foot for libraries) formula program to support Wi-Fi. While the *July Order* regrettably did not include needed additional funding for the E-Rate program, it did include a Further Notice of Proposed Rulemaking, which asked pointed questions about the program's future funding needs.

Throughout the current proceeding, ISTE has registered its support for the Commission's efforts to establish bandwidth-related goals for the E-Rate program and to focus funding on internal connections while maintaining support for Category 1 internet access services.⁵ However, as the need for robust connectivity within schools grows due to the explosion of online and digital learning materials and resources, the increased implementation of 1:1 programs and devices in the classroom, and the rollout of online assessments, we believe current levels of E-Rate support will prove inadequate, and more funding will be needed. Additionally, ISTE's informal survey of school district leaders regarding the *July Order* changes found a number of other concerns:

³ Modernizing the E-rate Program for Schools and Libraries, WC Docket No. 13-184, Notice of Proposed Rulemaking, 28 FCC Rcd 11304 (2013) (*E-rate Modernization NPRM*).

⁴ Wireline Bureau Seeks Further Focused Comment on Modernizing the E-rate Program, WC Docket No. 13-184, 29 FCC Rcd 2174 (2014) (*Public Notice*).

⁵ ISTE E-Rate Modernization NPRM Comments at 9; ISTE Public Notice Comments 6.

1. Many schools and districts indicated that they will suffer financial hardship due to the elimination of support for services, such as telephone (20 percent phase out per year over five years), email, and web hosting;
2. In many cases, the new formula funding for Wi-Fi available to schools and libraries will not offset their loss of support for services such as telephone, email, and web hosting;
3. Many schools and districts believe that their internet access (i.e. Category 1) needs will rise over the next five years and worry that E-Rate lacks sufficient funding to cover those costs;
4. The schools and districts surveyed unanimously support raising E-Rate's cap to address the comprehensive needs of schools and libraries throughout the country; and
5. Many of the schools and districts surveyed believe that the Commission should reverse the VoIP phase out in Category 1 and reinstate eligibility for VoIP equipment in Category 2 in order to support the transition to broadband.

III. Many schools and districts will suffer financial hardship due to the elimination of support for services such as telephone (20 percent phase out per year over 5 years), email, and web hosting.

Phone, website and email services are essential for schools — both for their daily communications as well as to reach first responders in case of an emergency. Many of the schools and districts surveyed indicated that the Commission's decision to render these services ineligible will inflict significant financial harm. Their position, in brief, is that the need for voice services will not disappear but the cost for maintaining them will now be entirely borne by schools. According to Mary Beth Fitzpatrick of Berkley School District in Oak Park, Michigan, "The landline phones are in every classroom and (are) part of our emergency plan so that staff can call 911 or the office, when applicable, to be certain our students are safe. This is very similar for our cell phones . . . With the loss of E-Rate, this will cause a hardship to the phone/cell phone budgets." Andrew Boegly, Director of Technology for the Colonial School District in Plymouth Meeting, Pennsylvania, agreed, explaining that his district used E-Rate voice support for "security and crises management with local law enforcement."

Alaska schools in particular will feel the pain of service eliminations. Bill Burr, Assistant Superintendent and Director of Technology for the Delta/Greely School District in Delta Junction, explained:

Without ERATE support of those services our district will face a TRIPLING of our costs. . . . Because of ... the complete inability to pay these costs and still support education, our district will need to drastically reduce these communication tools while at the same time trying to get more information out to our parents and community. . . . The elimination of voice/web services will effectively delete nearly the entire budget that is set to evergreen equipment, upgrade failing infrastructure, expand networks, utilize new technologies, and give PD to our instructional staff. This money will now be spent to provide the full cost of voice services which, as a rural school district, we need.

Mary Wegner, Superintendent of the Sitka School District, estimated that Sitka will lose \$15,294 in annual webhosting support and that it will see an initial loss of \$20,836.09 in phone service support. Sitka faces up to a \$58,000 loss when E-Rate phases out voice service completely.

Other stories of financial pain abound. Mary Cox, Purchasing Director for Ventura Unified School District in California, explained that the district will have to find a way to pay for the \$175,000 in telephone services previously supported by E-Rate. In the Virgin Islands, State E-Rate Coordinator Clinton Stapleton expects “significant hardship as we will now need to discontinue or fund 100% of these services from local funds, which continue to be reduced drastically each year due to challenging economic downturn for past few years.”

IV. In many cases, the new formula funding for Wi-Fi support will not offset a school or district’s loss of support for services such as telephone, email, and web hosting.

While many schools and districts welcome the new formula funding to upgrade their Wi-Fi capacity, many indicate that they will not actually benefit from it for a variety of reasons — they will be unable to afford the undiscounted match because of the loss of support for services such as telephone, email, and webhosting; they recently upgraded their Wi-Fi networks; or the per-student allocation will not meet their Wi-Fi costs.

David Biby, Director of Technology at the 800-student Christopher Unit School District #99 in

Illinois, explained that because his district will now have to cover phone and website costs, it may not be able to afford the match to receive Wi-Fi funds. Biby said that in the past, if the district had “\$10,000 in costs for our phone and website, our 80% discount . . . reduce(d) our cost to \$2,000.” However, with the changes, the district would “start out \$8,000 behind due to fixed costs (i.e. phones and website) and then have to pay our share of Wi-Fi improvements.”

Other districts that spent their own dollars to upgrade their Wi-Fi networks report that they will both not benefit from the new formula and have to bear themselves the full costs of the services eliminated. For instance, while the Sitka School District will be losing E-Rate support for voice and webhosting, it will not benefit from the new Wi-Fi initiative because the district recently paid for a new Wi-Fi network, which is projected to last for five years.

In a number of cases, the new rigid per-student formula allocation will not be sufficient to meet district needs. Robert Nielson, Director of Information & Educational Technology at Greenfield Union School District in Bakersfield, California, explained, “The money provided for Wi-Fi support in this new funding formula doesn’t come near to the amount the district needs to properly upgrade its aging infrastructure.” Plus, due to the service eliminations announced in the *July Order*, Nielson said that “the money the district will potentially receive for a partial Wi-Fi implementation will be less than what it costs the district to replace the services that were previously paid out of Priority 1 monies.”

Sitka expects a similar situation. Even if Category 2 has funding in five years (when Sitka needs to upgrade or replace its system), Sitka’s net from the Category 2 formula would amount to only \$14,300 per year, far less than it would require to replace and/or revamp its existing Wi-Fi equipment.

Some districts believe that, with their lower discount levels, they will never see Category 2 funding. Jay Greenlinger, Director of Instructional Technology at Pleasant Valley School District in Camarillo, California, worries that his district will lose over \$54,000 due to the E-Rate changes. However, he is most concerned that “our WAN discount will drop from 52% to 50% (and) we will never qualify for Category 2, based on our discount rate.” EdLiNC spotlighted this

very issue in its comments,⁶ citing Funds for Learning's recent chart, which shows that if all eligible applicants take their funds, the \$2 billion definitively allocated by the Commission for Category 2 for FY 2015 and FY 2016 would only reach the 80% discount level.⁷ After 2016, funding for Category 2 is uncertain and, even if \$1 billion is available per year, E-Rate funding would only reach the 50-60% discount range.⁸

V. Many schools and districts see their internet access (i.e. Category 1) needs rising over the next five years and worry that E-Rate lacks sufficient funding to cover those costs.

Schools around the nation are placing greater demands on their broadband networks than ever before due to proliferating use of online videos, courses and other collaboration tools; the deployment of formative and summative online testing; the implementation of 1:1 programs; and the expansion of Wi-Fi capacity itself. The Commission's own staff report expects demand for connectivity to the school building (i.e. Category 1) to expand in coming years.⁹

Commenters from states as diverse as Alabama, Alaska, Arkansas, Arizona, California and Illinois buttress this forecast. They indicate that they cannot wait five years to install or upgrade Wi-Fi, something that the dearth of funding in the program will cause many schools and libraries to do. Bill Burr of Delta/Greeley stated: "As more and more services are moved to web/cloud only for students in the district, the demands on bandwidth will expand." Due to these demands, as well as online testing, Burr expects his district will need to have at least 100 Mbps or "realistically more" in the next five years, up from the current capacity of 50 Mbps. Cox of Ventura County Schools, estimates that while her district has current bandwidth levels at 22 Mbps/1,000 students and plans to upgrade to 58 Mbps/1,000 students by the end of 2014, "There are times that our usage spikes, typically when multiple classrooms/sites want to stream video at the same time." Cindy Daniels, Assistant Superintendent of Chino Valley Schools in Arizona has experienced "frequent slowdowns and crashes" at the district's remote locations and the

⁶ EdLiNC July Order Comments at 3–5.

⁷ Ta'Chelle Jones, *Balancing the E-Rate Budget*, FUNDS FOR LEARNING (Sept. 9, 2014), <http://www.fundsforlearning.com/blog/2014/09/balancing-the-e-rate-budget> (FFL Chart).

⁸ *Id.*

⁹ Wireline Competition Bureau & Office of Strategic Planning and Policy, WC Docket 13-184, Staff Report (Aug. 12, 2014), at 18.

problems will likely grow because “as need for technology-enhanced instruction and assessment continues to grow, the demand on our current system will increase.”

Joe Magnani, IT Administrator for the Hope School District in Santa Barbara, California, indicated that his district’s current 75 Mbps per 1,000 students over three campuses is not sufficient, arguing that if his schools had “500 Mb/s each, (they) could effectively stream most multimedia content to each active host on our network without any issues.” He anticipates his district requiring “roughly 1,500-2,000 mb/s per 1,000 students over the next 5 years” due to increased use and reliance on video streaming and other types of media. At Concord High School in Arkansas, there are “several students every period of the day taking online classes.” Teacher Ronda Griffis wrote that “while this is an opportunity for our students to better themselves, it has caused a burden on our broadband. There are many times during the day that it is almost impossible to use the internet.”

Mike Kunz, Director of Technology at Collinsville Unit 10 School District in Illinois, added that while his district currently has 200 Mbps for more than 6,500 students and about 800 staff members, it needs additional internet speed to implement a 1:1 program. This need will continue to grow as Kunz estimates his district will “continue to need more internet speed increases to at least 500 Mbps in the next 1-2 years and double that after 2 years.” Meanwhile, Larry Smith, who has served as the technology coordinator for Lawrence County Schools in Alabama for the last 19 years, said that external broadband access and Wi-Fi density go hand in hand in a mutually reinforcing loop. Broadband access is “not an option for us, it is mission critical As we expand wireless in our district, it is necessary for us to add more broadband bandwidth,” Smith explained.

VI. In order to support the comprehensive needs of schools and libraries throughout the country, the E-Rate cap must be raised.

ISTE and its members have advocated time and time again for the need to raise the E-Rate cap. The school leaders quoted throughout this document spoke in a clear and unified voice on the need for additional E-Rate funding to meet both the internal and external connection needs of

schools to support the digital learning of today and tomorrow. At its core, E-Rate funding and technology integration in general is a matter of equity and preparedness for the future. Commissioner Rosenworcel has recognized this fact, arguing in her statement accompanying the *July Order* that it “is not just a matter of getting schools and libraries connected — it’s a matter of our global competitiveness. The world is flat. Knowledge, jobs, and capital will migrate to places where workers have digital age skills.”¹⁰ Educators clearly agree. Boegly laid out the challenge quite concretely stating, “Technology is now the growing concern for all districts, and if you do not stay current, the divide will continue to get larger and larger for the haves and have nots.” Wegner of Sitka, Alaska questioned: “How can we possibly afford to provide a relevant education for our students if we cannot afford to have the bandwidth to meet the needs presented by today’s connected world?”

But E-Rate’s funding issue is about more than abstract concepts such as “global competitiveness;” rather, it is about the practical need to deliver adequate broadband to every classroom and library in the country. As Alaska’s Bill Burr succinctly put it: more funding for E-Rate is needed because “there is no other way.” From his perspective, the changes in the *July Order* were an “incredibly painful setback” and if other changes (such as further drops to the discount matrix) occurred due to lack of funds, “the effect on the students of the district would be dramatic.”

District leaders from California to Michigan made it clear that external and internal connectivity needs plainly show that E-Rate funding must increase. Robert Nielson in Bakersfield declares: “I know that the money allotted to the program is not enough to upgrade the district's existing infrastructure nor to deploy a wireless network.” Cox shared that sentiment, saying “that the \$1 billion annual budget set by E-rate for Category 2 funding will not be sufficient to meet the needs of all schools.” Mary Beth Fitzpatrick in Oak Park, Michigan stated that “as each building moves forward with wireless and additional wireless devices along with continued use of desktop machines, connectivity speed will be constantly changing and the needs will continue to increase.” Overall, it is clear that in order to meet all school districts’ comprehensive

¹⁰ *July Order* (Rosenworcel Statement).

connectivity needs — and ensure equity among students and success in the global economy — the E-Rate funding level must be raised.

VII. The Commission should continue to support VoIP in order to support the transition to broadband.

One of the Commission’s main goals of this proceeding has been to encourage and support schools and libraries in their transition to broadband. It was for this reason that the Commission decided to phase down support for voice services in order to provide additional support for broadband-based services. However, the voice phase down did not just include basic telephone service (often referred to as POTs). Despite evidencing an interest in studying the migration of schools and libraries to interconnected VoIP in first two years of the voice phase down period,¹¹ the Commission decided to include VoIP in the voice phase down.¹² Further hamstringing its efforts to study the migration to VoIP, the Commission de facto eliminated VoIP as an option for many schools and libraries when it decided to eliminate immediately Category 2 support for VoIP equipment.

ISTE believes that these moves are mistaken. The Commission has itself acknowledged: while VoIP can be much less expensive than traditional phone service in the long run, the initial move to VoIP can be costly.¹³ If schools and libraries cannot afford to make the transition on their own due to the flash cut to support for Category 2 VoIP equipment, Mitel cautions that they “will be forced to continue using outdated — and more expensive — legacy voice services, which will mean that they will have less money for broadband both now and in the future.”¹⁴ ISTE agrees with Mitel that this would “be counterproductive to the goals of the E-rate Fund as a whole.”¹⁵

Many school leaders share the same concern as they wish to move to VoIP but are concerned about the lack of E-Rate support to facilitate that transition. Joe Magnani from California

¹¹ *July Order* at para.135.

¹² *Id.* at para.141.

¹³ *Public Notice* at para 42 n.64,65.

¹⁴ Mitel July Order Comments at 6.

¹⁵ *Id.* at 5.

explained that his district needs to replace its “aging digital phone system” over the next few years with something “more modern and network-based.” However, while VoIP is “the next obvious step” for the district, it would require “enormous support” to move beyond the current system. Mike Kunz from Illinois agreed, writing that due to E-Rate changes, his district will have to move from its current phone service to an I.P. system in order to make use of its current WAN/LAN infrastructure. This will “initially cost our district a large amount of funding,” Kunz wrote, and “there needs to be a plan in place on what alternatives districts have when moving from POTS lines to I.P. phone services.”

As school districts struggle to absorb the cuts to traditional voice services while juggling increases in broadband demand both to the building and within the school, the Commission should assist schools and libraries in their move to broadband by reversing the VoIP phase-out in Category 1 and reinstating eligibility for VoIP equipment in Category 2.

VIII. Conclusion

Upon the release of the *July Order*, ISTE CEO Brian Lewis stated that “the Commission’s efforts to promote Wi-Fi and broadband in our nation’s classrooms and libraries, coupled with increased funding in the not-too-distant future, has the potential to provide all students with the connectivity necessary for learning in the digital age.”¹⁶ The *July Order* moved the E-Rate towards the goal line but a significant and permanent increase in the program is absolutely merited and necessary for the program to reach the end zone. ISTE believes that now is the time to increase funding for the E-Rate so that schools and libraries across the country have the external broadband access and internal connectivity to support digital learning and prepare students for college and career. Many applicants will suffer financial hardship due to the elimination of services in the *July Order* and the new formula funding will not offset their losses nor will it be sufficient to provide Wi-Fi access to all schools and libraries. The transition to

¹⁶ Press Release, International Society for Technology in Education, ISTE Applauds FCC for Listening to Voice of Educators on E-Rate Modernization (July 11, 2014), *available at* <http://www.iste.org/about/media-relations/news-details/2014/07/11/iste-applauds-fcc-for-listening-to-voice-of-educators-on-e-rate-modernization>.

VoIP will be hampered as support for VoIP services and equipment is withdrawn and eliminated respectively. Moreover, as schools and libraries increase their Wi-Fi capabilities and continue to incorporate cutting-edge digital learning tools and resources into the classroom, the demand for external broadband connectivity to the building door will rise. The totality of the circumstances paint a clear picture—in order for E-Rate to continue its success for years to come, the Commission must increase its funding levels significantly.