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July 1, 2014

Chairman Thomas Wheeler
Commissioner Mignon Clyburn
Commissioner Jessica Rosenworcel
Commissioner Ajit Pai
Commissioner Michael O'Rielly

Federal Communications Commission
445 12th Street SW
Washington, DC 20554

Re: E-rate Modernization, WC Docket No. 13-184

Dear Chairman and Commissioners,

Connected Nation, Inc., a leading technology not-for-profit corporation devoted to increasing broadband deployment, adoption, and utilization, supports Chairman Wheeler's E-rate modernization proposal, delivered on June 20, 2014, to help close the "Wi-Fi gap" at the nation's schools and libraries. The fact that 3-in-5 American classrooms do not have adequate on-campus access is a significant barrier to deployment of 1:1 education models and widespread adoption of innovative digital learning across our libraries and schools.

While the Chairman's proposal wisely addresses an important gap in school and library technology needs, the Commission should recognize that on-campus wireless access is not the sole barrier to 1:1 learning that E-rate can and should address. Indeed, bridging the on-campus wireless access gap for school-issued devices will only highlight the looming and important gap and essential nature of off-campus wireless connectivity for those very same devices. In fact, moving forward with the Chairman's proposal without addressing the off-campus connectivity challenge will indeed hasten a significant digital equity issue. We therefore urge the Commission to recognize this looming digital equity divide and present as further rulemaking proposals strategies that will help address the off-campus connectivity challenge faced by schools across many of our most poor and rural communities.

Twenty-first century learning does not stop at the classroom door. Robust, reliable online access to educational content once students leave school is also essential for innovative 1:1 learning and blended educational models to succeed. Twenty-first century educational content is not simply digital versions of traditional textbooks; it includes interactive, tailored lessons and content hosted through third-party websites. Importantly, new educational models also assume student collaboration both in the classroom and, supported by online access, beyond the school. As a result, digital content cannot simply be stored or cached on a student's device. In order to fully maintain pace with their peers, today's students need online access to educational resources both on- and off-campus.

For schools with a student population that does not have access to broadband at home this off-campus digital divide is emerging as a key barrier to implementation of 1:1 learning models. If the Commission is able to close the on-campus wireless gap, off-campus broadband adoption disparities will become increasingly problematic and a barrier to the success of this educational technology.

This off-campus barrier is particularly prevalent in rural and low-income communities. Connected Nation estimates that, in 2013, only 69% of rural households subscribed to home broadband service, compared to 78% of households in urban or suburban locations.[1] Further, only 53% of households that report annual earnings below $25,000 subscribed to home broadband service, compared to 84% of households that earn $25,000 or more.[2] As the role out of technology-enhanced education models unfolds, school administrators and educators serving communities on the wrong side of the digital divide are increasingly being forced to address both the digital gap within their schools and off-campus.

Connected Nation recently facilitated a summit in Nashville, Tennessee that demonstrates this divide vividly, as the Metropolitan Nashville Public Schools (MNPS) district is directly grappling with the issue of how best to reach students with digital education tools when those students do not have broadband at home. With over 82,000 students, MNPS is one of the nation's largest public school districts.[3] The majority of MNPS students are an ethnic minority and an estimated 72% qualify for free or reduced meals.[4]

Based on research conducted by the Tennessee Department of Education, an estimated 44% of MNPS students do not have Internet access in the home, a rate much greater than the national average.[5] Even more importantly, this rate varies significantly across MNPS district schools. Estimates range from only 1% of students at Maplewood Comprehensive High School having Internet access at home, and only 10% among LEAD Academy students, to 90% of students at Martin Luther King Junior Magnet Pearl High School and 95% of students at Percy Priest, Granbery, and Glendale Elementary schools having Internet access at home.[6]

This disparity in home broadband access presents a significant barrier to the success of any Internet-enabled education technology initiative across MNPS, especially blended and 1:1 device learning models. Stated simply, putting technology and devices into the hands of students at one school where hardly any students can use that technology to its fullest extent off-campus, while students at other schools can fully leverage that technology both on- and off-campus, creates a significant technology and a potential education achievement gap. To close this gap, MNPS is working with public officials and private stakeholders throughout Nashville to develop innovative solutions to connect all students. Specifically, MNPS, working with the Community Foundation of Middle Tennessee, is launching a digital inclusion fund "meant to bridge the digital divide and bring greater technology access to students and homes in underserved areas."[7]

At the May 2014 *Anytime Access for All* Leadership Summit, hosted by Connected Nation in collaboration with the Mayor of Nashville and MNPS,[8] Laura Hansen, director for information management for MNPS, discussed the digital inclusion fund, saying, "We want those funds to be directed at the problem and . . . those funds to be

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[1] CONNECTED NATION CONSUMER BROADBAND TRENDS, http://www.connectednation.org/residential-survey-data (last visited June 30, 2014).
[2] *Id*.
[3] 2013-2014 Facts, Metropolitan Nashville Public Schools, http://www.mnps.org/AssetFactory.aspx?did=81681.
[4] Joey Garrison, *Metro Schools to offer free meals to all students*, THE TENNESSEAN, June 11, 2014, *available at* http://www.tennessean.com/story/news/education/2014/06/10/metro-schools-offer-free-meals-students/10311475/.
[5] TECHNOLOGY IN EDUCATION SURVEY SYSTEM (TESS) FOR THE TENNESSEE DEPARTMENT OF EDUCATION, http://www.crepsurveys.net/TESS/Public.jsp (last visited June 30, 2014).
[6] *Id*.
[7] Jaime McGee, *Nashville starting fund to help boost Internet access*, THE TENNESSEAN, May 21, 2014, *available at* http://www.tennessean.com/story/money/tech/2014/05/21/nashville-starting-fund-help-boost-internet-access/9404803/.
[8] Jennifer Cobb, *Metro Nashville, MNPS, & Connected Tennessee Host Landmark "Anytime Access for All" Education Technology & Connectivity Leadership Summit*, CONNECTED TENNESSEE BLOG (May 29, 2014), http://www.connectedtn.org/blog/post/metro-nashville-mnps-connected-tennessee-host-landmark-%E2%80%9Canytime-access-all%E2%80%9D-education-tech.

used as close to the families as we can."[9] The *Anytime Access for All* Leadership Summit was focused on the digital divide that exists between the very-fast, high-speed Internet available on-campus versus the lack of connectivity at home and off-campus, and how to empower students through access to the vast and interactive resources available online.

However, as noted by Marc Hill, chief policy officer at the Nashville Area Chamber of Commerce, the need for digital skills spans beyond an education and social issue; it is an economic issue as well.[10] Placing technology in the hands of students is needed to educate the digitally-skilled workforce of tomorrow. As E-rate provides funding to all schools to build Wi-Fi on campus, wealthy districts will be able to proceed without hesitation. However, faced with student populations who cannot access online content at home, low-income and rural districts will be forced to forego or delay adopting 1:1 learning models. Failing to recognize that not all students can take full advantage of technology off-campus threatens to transform the broadband adoption gap into an educational achievement gap.

Through the E-rate program, the Commission has the power and opportunity to address this impending divide and help schools across the nation, such as MNPS, overcome these connectivity barriers.

As further rules are contemplated in the E-rate modernization, we urge the Commission to consider methods to fund off-campus access for institution-provided devices used for educational purposes. In particular, we believe the Commission should propose:

(a) To create a limited, dedicated fund that would allocate support for off-campus wireless connectivity, sized and allocated to schools based on the estimated number of students without broadband at home, which Connected Nation estimates to be 12.7 million[11] students grades K-12 across the nation; and

(b) To facilitate statewide, regional, or nationwide bulk purchasing of off-campus wireless connectivity, which would save personnel resources and reduce connectivity costs.

Addressing our schools' Wi-Fi connectivity is an important component to sparking innovation in the education technology space. However, a complex policy challenge remains on the horizon for those schools that will be unable to fully embrace 1:1 and similar learning models unless and until they can address the off-campus connectivity barrier for all students.

Thank you for your consideration.

Sincerely,

/s/ Tom Koutsky, Raquel Noriega and Lindsay Shanahan

Tom Koutsky, Chief Policy Officer
Raquel Noriega, Vice President, Public Policy
Lindsay Shanahan, Counsel Broadband Research and Planning

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[9] *Nashville starting fund to help boost Internet access*, http://www.tennessean.com/story/money/tech/2014/05/21/nashville-starting-fund-help-boost-internet-access/9404803/.
[10] *Id*.
[11] Connected Nation, *Educators Work to Close Technology Gaps, Even While Students Enjoy Vacation*, CONNECTED NATION BLOG (June 30, 2014), http://www.connectednation.org/BlogPost/educators-work-close-technology-gaps-even-while-students-enjoy-vacation.