Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	
Notice of Proposed Rulemaking	FCC 18-59
Transforming the 2.5 GHz Band	WT Docket No. 18-120

COMMENTS OF COSN ON PROPOSED SERVICE RULES ON THE 2.5 GHz BAND

The Consortium for School Networking (CoSN) is the premier professional association for school system technology leaders. CoSN provides thought leadership resources, community, best practices and advocacy tools to help leaders succeed in the digital transformation. Today, CoSN represents over 13 million students in school districts nationwide and continues to grow as a powerful and influential voice in K-12 education. Our members include existing Educational Broadband Service (EBS) licensees and school districts that would like to become EBS licensees in order to better use digital learning to help students acquire the knowledge and skills they will require for later workplace and academic success.

CoSN welcomes the Federal Communications Commission's (Commission) decision to update the rules governing EBS and to provide school districts and other community education partners a long-awaited and much needed opportunity to acquire EBS licenses. Maximizing the impact of digital learning for all students, in school and outside of school, will require school districts to adopt new practices, including finding innovative and better ways to connect unserved and underserved students to broadband at home. In communities struggling to connect

marginalized residents to the internet, typically geographically isolated and poor communities, affordable wireless service must be part of a school district's broadband connectivity strategy.

In marginalized communities, enabling additional school districts and education partners to use the 2.5 GHz band to deliver high capacity broadband will have a huge impact on efforts to close troubling and persistent "homework gaps." A recent study by the U.S. Department of Education, required by the Every Student Succeeds Act (P.L. 114-95), confirmed that far too many students still lack access to broadband for learning and that this connectivity problem is even more pronounced for rural, poor, and minority students.[1] New EBS licensing opportunities, supported by improved service rules, examples of best practices, and facilitated by the declining infrastructure costs associated with this spectrum, can equip educators with a greatly needed additional tool for meeting marginalized students' home broadband needs. The Commission should maintain the 2.5 GHz band's focus on education, expand existing and future licensee's service areas to better cover places where their students live, and take other steps, such as highlighting successful models, to support local use of this valuable educational spectrum.

THE COMMISSION SHOULD UPDATE, NOT ELIMINATE, THE EBS EDUCATIONAL USE REQUIREMENTS

The Commission should update the EBS educational use requirement to encompass modern digital learning practices, so that licensees and leaseeas share a guiding vision for meeting communities educational infrastructure needs. EBS already benefits many communities and the spectrum has great potential to help even more students prepare for success after graduation, including by serving as an effective tool for school districts to address the persistent

[1] *Student Access to Digital Learning Resources Outside of the Classroom,* U.S. Department of Education, Institute of Education Sciences, (April 2018)

high-capacity broadband "homework gap" facing 5 million households.[2] Lack of access to broadband negatively impacts learning, especially for the student subgroups that typically need the most support, but the "homework gap" is growing. Eighty percent of 8th graders now report using a computer at home for schoolwork on a weekday.[3] An educational use requirement can help ensure this problem, and other educational needs, are addressed by licensees,.

A 2018 digital learning study by the U.S. Department of Education's Institute of Education Sciences (IES) shows that geography plays an important role in home-based internet access and that students in "remote rural" and "distant rural" areas generally have more limited internet access than students in suburbs, cities or towns. The IES study also showed that students living below the poverty threshold have the lowest rates of home internet access and that American Indian, Alaska Native, Black, and Hispanic students have lower rates of home internet access than their peers who are White, Asian, or two or more races. This gap has serious educational implications; students without home internet access had lower assessment scores in reading, mathematics, and science.[4]

As described by the Commission's Notice of Proposed Rulemaking, many communities, particularly in the Western United States, do not have EBS licensees.[5] The absence of licenses in western communities deprives school districts and their partners of a connectivity tool that might address their students' needs. This condition is at least partly attributable to the FCC's longstanding failure to provide new EBS licensing opportunities, which has denied many school districts and their community partners access to a valuable tool for connecting students to broadband at home. With market conditions changing, including declining build-out costs

[2] *Pew Research Center Analysis of 2013 American Community Survey,* (2013).
[3] U.S. Department of Education, National Center for Education Statistics. (2018). Student Access to Digital Learning Resources Outside of the Classroom (NCES 2017-098), Executive Summary.
[4] Ibid.
[5] Proposed Rules for Transforming the 2.5 GHz Band, 26396 Federal Register, Vol. 83, No. 110 (2018).

associated with global economies of scale in this band, CoSN believes it would be premature to eliminate the 2.5 GHz band's educational focus, even if some licenses remain fallow at the conclusion of the next licensing windows. Instead, the FCC should maintain an updated and long term educational focus in the 2.5 GHz band, using a definition that is inclusive of digital learning components such as broadband delivery, and adopt policies that facilitate the spectrum's effective use as a broadband connectivity pathway for unserved and underserved students.

THE COMMISSION SHOULD ADOPT EXPANDED EBS SERVICE AREAS TO MAXIMIZE SCHOOL DISTRICTS' ABILITIES TO REACH THEIR STUDENTS

CoSN urges the Commission to adopt more rational EBS service areas, including permitting existing EBS licensees to expand their "footprints" as one strategy for minimizing the number of unserved "white spaces." The irregular shaped patchwork of EBS licenses spanning the country, a legacy of the system's Instructional Television Fixed Service roots, does not align well with the design and delivery of the two-way high-capacity broadband services required by students. The current system design also contributes to the prevalence of EBS "white spaces."

Given the vastly different systems for establishing school district boundaries across the country, no single geopolitical approach to establishing services areas will ensure that every district is able to use an EBS license to deliver broadband to every one of their students that lack high-capacity broadband. As the Census Bureau notes, school districts are "locally administered, and their geographic structure varies by state and region. Most districts in the Mid-Atlantic and New England states follow county, township, or city boundaries, while districts in the Midwest and Western states are generally independent of municipal boundaries and frequently intersect statistical areas like Census tracts and block groups."[6] Recognizing this context, the Commission

[6] U.S. Census Bureau Website. Last visited July 23, 2018. https://www.census.gov/did/www/schooldistricts/

must plan carefully to ensure that the Final Rule enables EBS licensees to reach as many local students as possible.

In light of the irregularity of school district boundaries and to address unique local conditions, CoSN urges the Commission to adopt the more granular census tract approach, which we will provide the flexibility required to target service to a maximum number of students in rural, suburban and urban districts, while also minimizing service conflicts. Service areas must be big enough for school districts to reach all unserved and underserved students, while also minimizing conflicting operations among districts and other EBS licensees working to connect students to the internet. District's irregular boundaries also argue for an approach that encourages and cultivates consortia models designed to promote collaboration and partnerships focused on maximizing student and community access.

THE COMMISSION SHOULD PERMIT STATE EDUCATION AGENCIES, EDUCATIONAL SERVICE AGENCIES, AND OTHER ANCHOR INSTITUTIONS TO ACQUIRE NEW EBS LICENSES

Achieving the challenging goal of connecting all students to high capacity broadband, and the educational benefits digital learning confers, will require an EBS structure that embraces involvement by a diverse array of licensees, including consortia, that are committed to boosting student connectivity rates. CoSN anticipates that many school districts will take advantage of EBS licenses opportunities proposed by the Commission, but some districts will elect not to use this tool and other districts may not have the resources to follow this path independently. Given this reality, the Commission should welcome state education agencies, educational service agencies, and other community anchor institutions to apply for EBS licenses, so long as they commit to serve the students in their services areas, including meeting meaningful buildout and substantial service requirements. As described above, Commission should also permit and

encourage consortia applications so that partner organizations and anchors can work together to fill broadband service gaps for students in their communities.

THE COMMISSION SHOULD NOT USE AUCTIONS TO DISTRIBUTE 2.5 GHz LICENSES OR TO RESOLVE COMPETING APPLICATIONS

Most school districts, other educational entities, and anchor institutions do not have the resources required to pay for spectrum licenses. Public spectrum should be available for free for public educational purposes and using auctions – as a primary way to distribute new licenses or as a way to resolve conflicting applications - will only make it harder for districts to serve the marginalized students that do not have the access they need to broadband.

Even in light of declining 2.5 GHz infrastructure costs, districts that acquire EBS licenses will have to allocate significant resources to build out the systems required to serve their students. Adding auction costs to this front-end investment may preclude districts from pursuing EBS licenses and we know market incentives are not sufficient to drive major commercial providers - the only entities that have the resources required to buy licenses - to meet the needs of marginalized students. If market forces were sufficient, this connectivity problem would not exist in so many rural and other hard to serve areas. Instead, conflicting license applications should be resolved by a "first in time, first in right" system, so long as the first filed applicant satisfies all relevant requirements and demonstrates the ability to use the spectrum successfully. A consortia based model for resolving competing applications would also be a useful alternative to auctions, which would create unworkable barriers to entry for school districts.

THE COMMISSION SHOULD PERMIT LEASING BUT ONLY IN CONJUNCTION WITH MEANINGFUL BUILD OUT REQUIREMENTS AND A COMMITMENT TO SERVE ALL UNCONNECTED STUDENTS IN THE SERVICE AREA

Public private partnerships, underpinned by new educational service requirements, can provide a practical way for licensees with limited resources to collaborate with commercial

providers to meet students' needs. The current system, however, has failed to deliver on EBS's educational promise by not focusing on reaching "homework" gap students and by not utilizing effective build-out requirements and relying on insufficient service requirements. CoSN urges the Commission to adopt build-out and substantial service requirements that lead to service availability for all homework gap students in the service area, as determined by the licensee school district, licensee anchor or other licensee community partner. Licensees should not be permitted to only use the spectrum as a revenue stream. The Commission should also not permit licenses to be sold to commercial partners. Selling the licenses will erode the educational nature of the EBS channels and fail to meet the needs of the communities on the wrong side of the digital divide.

SCHOOL DISTRICTS ACROSS THE COUNTRY ARE USING EBS EFFECTIVELY AND CAN SERVE AS MODELS FOR OTHER COMMUNITIES

Many school districts are using EBS spectrum effectively to meet the broadband needs of marginalized students and their peers should have the same opportunity. The Commission should learn from existing EBS success stories and take steps to help new licensees follow in their path, including by swiftly opening new licensing windows for school districts and other eligible entities. For example, we call the Commission's attention to the following district EBS initiatives, which are using the spectrum to meet students' digital learning needs, including in rural areas:

Albemarle County Public School district (VA) serves approximately 14,000 students in a mostly rural area covering over 700 square miles in Central Virginia. ACPS delivers broadband access to a portion of the district's unserved and underserved students using EBS spectrum. The ACPS EBS system utilizes mountainside towers that link to connections on nearby schools. The

district is working to expand the system to provide greater broadband access to more of its students and it offers an ancillary community benefit through a partnership with local emergency service providers who will also use the spectrum for emergency communications. The project's final phase will provide outdoor routers (one for every house with students) designed to deliver connections from the towers to school-issued computers free of charge.

Desert Sands Unified School District's (CA) *Connect* initiative is using EBS to connect students to broadband at home. Located in the central area of the Coachella Valley in the desert of Southern California, Desert Sands serves children from Bermuda Dunes, Coachella, Indian Wells, Indio, La Quinta, Palm Desert, and Rancho Mirage. The district is 750 square miles, separated into five trustee areas. Through *Connect*, students that need a WiFi connection at home will be issued a MiFi device so they can use the district's LTE network. This exciting project, scheduled to begin for the 2018/2019 school year, will involve students at the district's middle and high schools and a few elementary schools. During the 2019/2020 school year all students in grades two through twelve will participate in the initiative.

Kings County School District (CA) is located in the San Joaquin Valley. The district serves 27,000 students living across a 1400 square mile, mostly agricultural region. District leaders recognized that many students in the district lacked access to reliable broadband to complete homework. After evaluating the problem, Kings County leaders decided to use EBS to provide home broadband connectivity for district students. Launched in 2011, the Kings County EBS system uses towers built on school roofs. District leaders credit the EBS system with supporting district performance improvements including declining suspensions (60% decrease), fewer failed classes (10% decrease), better standardized test scores (students passing core courses has doubled) and higher graduation rates (over 90%).

CONCLUSION

Given the large number of students across the United States that lack access to high speed broadband, we encourage the Commission to adopt improvements to the EBS regulatory framework that will help school districts and their partners acquire and use this valuable spectrum. The Commission should update and continue the band's focus on education, permit state education agency and educational service agency licensing, expand existing and future licensee's service areas to better cover places where their students live, and take other steps, such as highlighting successful EBS models to encourage replication and scaling.

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