



Utah Education and Telehealth Network

# UETN EBS Response to the FCC Notice of Proposed Rulemaking (NPRM) August 7, 2018

## UETN history and details

Utah Educational and Telehealth Network (UETN) connects all Utah school districts, schools, higher education institutions, libraries and telehealth stakeholders to a robust network and quality educational and telehealth resources. UETN is one of the nation's premier education networks providing Internet and Internet2 access to its stakeholders throughout Utah. The network saves Utah institutions thousands of dollars per month by purchasing Wide Area Network, Internet, and educational services in bulk from multiple competing providers and ISPs.

UETN infrastructure carries high-speed data and real-time applications, including video, to communities throughout the state. UETN is a high capacity network that connects a majority of educational entities at 1 Gbps. Network engineers and staff research, design, build, monitor and contract with multiple Utah service providers across the state to provide this network. This public/private partnership benefits businesses and homeowners who gain increased bandwidth because UETN is the anchor tenant for vendors that provide services within their local communities.

UETN's role is to work and support the Local Educational Agencies (LEAs), healthcare, libraries and the universities in all aspects of the educational network and Internet access. It's highly important that UETN works with each LEA in the state to help them provide internet access to students in their districts'/schools' service areas. The EBS white space that is available in many of the rural areas of Utah can extend the school network allowing the underserved students access to educational resources.

## General Comments

Educational Broadband Spectrum (EBS) has a long history as an educational asset. It is UETN's recommendation that EBS should be kept as an educational asset. This is its pedigree as originally conceived and has been its history. Developments in educational technology continue at a strong pace, with online courses, electronic textbooks, and use of Chromebooks and tablets increasing in a manner that will undoubtedly continue. The need for all students to have access to online resources has grown and will only continue to grow. Network access is crucial for rural and urban high-need students and their families.



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UETN, as a community of school districts, colleges and universities across Utah, is very concerned about the potential loss of access to EBS spectrum. It should not be opened to commercial auctions.

We support the FCC's consideration of adopting the Wireless Radio Service (WRS) Reform NPRM's for all license renewals to EBS spectrum. This assures that license holders meet the performance and build-out requirements of their spectrum, whether owned or accessed under lease by another commercial entity. The spectrum will serve its best maximum potential by implementing increased performance and build-out requirements for existing licenses.

We believe that EBS should continue to be an asset optimized to benefit educators and students. In each geographic area, EBS should be made available to the entity that can best leverage its capability and potential in offering educational internet to the community. EBS licenses are not issued permanently to educational organizations. They are granted to a license holder for a fixed duration of time. All EBS licenses are subject to renewal on a 10 year cycle. At the time of renewal, we recommend that licenses be reviewed for best use in meeting educational needs.

UETN believes grandfathered leased licenses prevent or disincentivize educators from leveraging current technology such as a 4G LTE network for their students.

UETN recommends that the FCC develop a process for handling current licenses. This process should address the following areas:

- Ensure the license holder submits its substantial use and educational capacity metrics at least 180 days before a license is due for renewal. This is measured by the specific blocks licensed using the new NPRM's construction performance requirements.
- Ensure that when the substantial use or educational capacity requirements are not met, the license will be flagged for termination.
- Require that the FCC will provide a 120 day advance public notice that the license renewal has been revoked.
- Ensure that the FCC will offer a 75 day window for other entities to file for the license as proposed in Appendix B, parts 19-21.

The process for lease applications should address the following areas:

- Require that the FCC will provide a 120 day Public Notice window once a license holder files a lease arrangement for its spectrum.
- Require alternative educators or Native American tribes to submit, via public comments, plans on how they will utilize the spectrum for its needs and how they will



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meet construction requirements, educational use requirements, and build-out timelines.

- A provision that would allow the spectrum to be open to other leases in cases where no educational entity responds.
- In cases where there are multiple responses, the FCC should weight the responses as to which proposal will provide the best spectrum utilization and service to the students and community.
- In cases where the FCC supports an alternative applicant's proposal, ensure that all or part of the original Geographical Service Area (GSA) be allocated to meet the needs of the alternative applicant. If a partial allocation of the GSA is required, then the alternative applicant receives their GSA, and the residual GSA could be subject to lease.

Ownership of an EBS license is not a right, it is a privilege. This privilege should be held by educators who will best meet the needs of their students and community.

#### **Comment - Appendix A § 27.14 Construction Requirements**

UETN supports the policy, that upon renewal of a license, the new educational capacity and build-out requirements be applied. The absence of addressing build-out requirements assures vast amounts of spectrum will continue to be underutilized.

UETN suggests the following changes in wording to clarify the change. *“All Broadband Radio Services (BRS) and EBS licenses issued after **[insert effective date of new rules]**, must demonstrate compliance with the performance requirements described in this paragraph. All equipment used to demonstrate compliance must be in use and actually providing service, either for internal use or to unaffiliated customers, as of the interim deadline or the end of the license term, whichever is applicable.”*

#### **Comment - Appendix A § 27.1206 Geographic Service Area.**

UETN recommends that the GSA be based on census tracts, which is a more granular approach to spectrum allocation. Utah's rural school districts are aligned by county boundaries, yet most urban districts are not aligned by county boundaries. Using census tracts assures the best fit for all licenses.

UETN opposes the expansion of existing GSA to county boundaries. With over 90% of the existing EBS licenses on lease, the expansion could overlay onto a Native American tribe or another educational entity that would like access to whitespace EBS to cover their local broadband needs. The expansion of existing GSA's prevents the development of new networks from offering broadband services which would aid in educational network access



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for all students. Expanding GSAs would be a disservice, locking out potential new license holders who desire to address the internet needs of their local communities and students.

**Comment - Appendix A § 27.1214 EBS spectrum leasing arrangements and grandfathered leases.**

In the FCC's 6th Report and Order, it recognized the value of community use of E-rate supported services for providing community access to community anchor institutions' broadband services. Extending the concept of community use for EBS interconnections initiated by educational entities furthers the goals of the FCC's desire to ensure appropriate use of EBS spectrum and may help to narrow the homework gap that increasingly frustrates online access for students while off-campus and challenges libraries' provisioning of after-hours patron access to library resources. Currently, E-rate supported broadband to a school or library cannot be used beyond school or library property. If a school or library is similarly allowed to repurpose its broadband link for this type of community use now authorized in the E-rate program, it would enhance these anchor institutions' ability to offer educational content and ensure Children's Internet Protection Act (CIPA) filtered internet to students or patrons beyond the school or library property. Allowing this type of community use through EBS interconnections to E-rate supported broadband would eliminate the need for any E-rate cost allocation of such usage through EBS last mile connections and help community anchors resolve the growing problem of off-campus and after-hours access.

We support the concept that the FCC should provide the spectrum to entities that would offer the most educational value, as shown by the immediate and approximate needs of local communities. This could be through Native American telcos or educational entities willing to build-out a network in support of their students and communities; not monetized through a third party.

Should leasing continue to be allowed, UETN suggests that there be a public comments window before approving any existing license considered for lease. Should a Native American tribe, or eligible educational entity require the spectrum for their network build-out, they should be provided the right of first refusal of the spectrum ownership transfer and would take responsibility for the build-out and educational capacity requirements. If only a subset of the spectrum is required or utilized by the current eligible entity, the spectrum needed for the other entity's network could be allocated to them from the unused portion. The FCC could transfer the license to the new entity and enforce the build-out and educational performance requirements.

Educational capacity requirements should be equal for all license holders. If these requirements are increased to 20% of coverage requirements, then this should be applied to all license holders, both legacy and new allocations.



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Equally, all licensed EBS spectrum should have mandatory build-out requirements tied to the EBS bands held by the license holder. For example, a license holder of channels A1-4 must demonstrate substantial use for those specific frequency ranges. With the FCC's goal to ensure all spectrum is utilized, substantial use must be enforced. UETN believes that many leased licenses are meeting substantial use requirements based on spectrum either not within the GSA or are using other frequency, such as BRS. Such loopholes should be eliminated to assure all spectrum is actively utilized.

UETN also recommends that the FCC adopt harmonized renewal as established for the 600/700 MHz spectrum WRS reform. At the time of renewal, any failure to meet substantial use mandates should be cause for possible revocation of the license and issuance to another qualified entity.

**Comment - Appendix B Part 16. Additional Flexibility for EBS Licenses.**

EBS should remain an educational spectrum. Transfer to non-educational entities and the elimination of the educational capacity requirements undermines the legacy of EBS.

UETN recommends that no license holder, (existing or issued under a waiver), be allowed to transfer/assign control of their license to a non EBS-eligible company. If a license holder cannot meet the requirements of the license, then that license should be revoked and returned to the control of the FCC. The FCC can reissue the license as proposed under Appendix B, parts 19-21.

License holders should be aware of the obligation undertaken when granted an EBS license. Failure to meet the requirements could result in having the license revoked. The revoked license would open the door for other Native American tribes or educational institutions to be granted access to their required GSA.

A growing trend over the past few years is schools building their own private LTE networks where private sector interest in providing broadband infrastructure is absent. These private networks provide network access to educational resources for students and the community. These networks provide safe and equal access to the internet for all students. The pace of these deployments is growing. There are many educational organizations that would like to provide similar services, but lack of spectrum and regulatory uncertainty is stifling their deployments. Should the FCC embrace a means of recovering unused spectrum, others could deploy their network and meet the needs of their underserved communities.

UETN's experience with local EBS license holders in the Salt Lake City area shows that all EBS licenses are currently under lease. These historical arrangements, made during a time



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of rapid technological change, now prevent UETN and our educational stakeholders from leveraging the EBS spectrum needed to build an educational LTE network for an educational purpose. If the proposed build-out requirements are enforced, it increases the likelihood that licenses would be returned to circulation, offering educational entities the possibility of access to the EBS spectrum. The license would allow educational organizations to build out a broadband wireless network for its underserved students.

UETN suggests that the FCC could adopt a new approach. All licenses, both new and existing renewals, should meet equal construction and educational requirements proposed for new license holders. In cases where the license holders are unable to meet the new requirements, the spectrum should be returned to FCC control and then can be reissued under the proposed window described in Appendix B.

**Comment - Appendix B, Part 17. Opportunities to Acquire New 2.5 GHz Licenses.**

UETN supports the proposed possibility of acquiring new EBS licenses. We have offered comments to each of the proposed windows.

**Comment - Appendix B, Part 18. New Local Priority Filing Window**

This requirement should be stated on all EBS licenses, new and existing. If a license holder cannot demonstrate proper local presence, there could be other local educational or tribal entities interested in utilizing the spectrum to meet the educational requirements for the immediate community. Failing to enforce local presence on all licenses, deprives these communities and students of the benefits of leveraging EBS spectrum for learning.

UETN recommends that all license renewals require a local presence. Should the license holder fail to prove local presence, the license should be revoked and redistributed via filing window process 2 and 3 or go to commercial auction.

When license holders do not have a local presence, the educational capacity requirement is removed from the local community and the needs of the community are not best served. Currently, most educational capacity requirements are serviced by offering LTE Hotspots to the license holder. In many cases, service for these devices is not available in the high need areas.

State and regional organizations that provide network access, localized onsite technical support, and network engineering resources for educational entities in their state should be considered as having a local presence where these entities reside. These state/region wide agencies working with local LEAs should be granted the ability to help apply for and acquire the EBS spectrum for the schools in the state that they provide education and network resources for student learning.



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### **Comment - Appendix B, Part 19. Local Priority Filing Window 1**

UETN opposes the expansion of existing GSA to county boundaries. Expanding GSAs would be a disservice because it would lock out potential new license holders who desire to address the internet needs of their students and community via access to white space spectrum. The expansion of existing GSA's would prevent the development of new networks being able to offer broadband services to aid in providing robust network access for student learning.

It is our recommendation that the new GSA be based on census tracts. This granularity of geographical area allows for "exact" fitting of coverage area alignment. In UETN's case, some of our school districts are aligned by county boundaries. Yet there are other counties with multiple school districts. Using census tracts assures the best fit for all licenses.

Should the final ruling lean towards expanding the GSAs, UETN recommends that any expansion falls under the construction and educational requirements of a "new license". Therefore, if an expansion is allowed, the license holder must meet 20% of educational use and population coverage requirements, as proposed in Appendix A Construction Requirements. This will treat the expansion as a new license and therefore carry the requirements as defined.

### **Comment - Appendix B, Part 20. Local Priority Filing Window 2**

UETN supports the option that tribal nations have first priority.

UETN recommends a limit on the number of channels issued and suggests that the FCC limit the license to two channel groups, a total of eight unique channels of EBS.

UETN also suggests the FCC consider less aggressive build-out requirements for native lands. Due to the often rural nature of native land, coverage can be challenging. We look to other commenters for their suggested requirements.

### **Comment - Appendix B, Part 21. Local Priority Filing Window 3**

UETN recommends that any new releases be made at a census tract. This prevents over-allocation of spectrum that might impact other school districts or communities.

The issue UETN sees with county boundaries is that most licenses are issued to K-12 districts or local colleges/universities. Counties have multiple educational entities within their boundaries. One entity may elect to lease or transfer ownership of the license at the detriment of the others within the county. If the license is limited to the census tracts where



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they have a local presence, it prevents over-allocation of the GSA and competition between schools/districts within the same county.

We further suggest the FCC adopt wording that assures any new license, if issued at a county level, has support of all educational entities within the GSA. This means the license applicant would need approval from the other LEAs in the county, and the license will be used to support all educational users within the County GSA. This prevents a license from being held by an individual educational entity and not benefitting the entire county. That situation would be avoided by close coordination between the districts in the county regardless of who holds the license.

As mentioned in Window 1, we suggest a new license be limited to a total of two channel groups, for a total of eight unique EBS channels.

**Comment - Appendix B, Part 22. Local Priority Filing Process.**

UETN suggests a 75 day filing window with at least 120 days advance notice.

**Comment - Appendix B, Part 23. Resolving Mutually Exclusive Applications.**

UETN recommends that if there are two applications for the same GSA, that the parties be provided 45 days for an arbitration period prior to a competitive bidding process.

If licenses are issued at a census tract and not bounded by county, the possibility of mutually exclusive applications is minimized. Therefore, UETN recommends census-tract-based GSAs.

**Should there be** a competitive bidding process, UETN recommends that merits beyond purchase price be considered. For example, an applicant who intends to use the spectrum exclusively for educational use and is willing to meet the requirements of the license, should have a higher weight over an applicant desiring to lease or partner with a non-educational institution. Should one applicant desire to place the spectrum on lease, the FCC should reject the application and auction the spectrum as suggested in Appendix B, Part 25, Licensing White Spaces.

**Comment - Appendix B, Part 24. Holding Periods for Licenses Acquired Through a Local Priority Filing Window.**

UETN recommends that if a license holder is not willing or able to meet the requirements of an EBS license (build-out requirement and educational capacity), that they not be granted the license. The license should be made available to any other tribal or educational institution within the GSA willing to meet the terms of the license. If these requirements are not met, the spectrum would go to competitive auction.



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It is our recommendation that new EBS licenses should never be eligible for lease or transfer/assignment. If the license holder cannot meet the requirements of build-out within 3 years, the license is revoked and reissued via Filing Window 2, 3 or commercial auction.

**Comment - Appendix B, Part 25. Licensing White Spaces.**

UETN recommends a compromise position on auctioning off white space. We recommend the FCC retain a subset of the available white space spectrum for future educational use. For example, if an area has all available channel groups of EBS (A, B, C, D and G), three of the channel groups, (12 channels), are auctioned off and two blocks, (8 channels), are retained for future educational use.

In areas where most of the EBS is allocated, a minimum of one channel group, (4 channels), is retained and the others auctioned off.

As technology continues to be a component of education, educators will see greater demand for deploying on the EBS spectrum. By retaining or preserving some of the spectrum, it allows for future applications that have yet to be realized.

**Comment - Appendix B, Part 26. Requirements for New 2.5 GHz Licenses.**

UETN recommends defining an “educational broadcast service” as that which would extend student internet access beyond school boundaries and into the community. This would be a means of supporting students in underserved rural communities. Rather than seeking to reach 100% of a student population, UETN would like to better define an educational broadcast service as interim service for 50% of the *student* population and final benchmark of 80% of the *student* population.

**Comment - Appendix B, Part 27. Cleaning Up the 2.5 GHz Rules.**

UETN has made comments on Appendix A earlier in our response.

**Comment - Appendix B, Part 31.**

UETN understands the FCC’s desire to prevent hardship in small entities. With the interest of the FCC to deploy EBS spectrum and have it fully utilized, enforcing performance requirements on existing licenses presents both a conflict and an opportunity.

A majority of EBS spectrum has been leased to cellular/mobile providers and companies. Outside of primary and secondary cities, much of this spectrum is not utilized where it is needed most. By adopting new performance requirements on all licenses, there is the assurance that the spectrum will not continue to be underutilized. Unused licenses returned

to the FCC could be reissued, using the proposed filing window, to an entity that would be required to build out the network.

UETN proposes that the FCC adopt the new suggested performance and educational capacity requirements for an existing license holder at the time of renewal. Many of the license holders and lessees have had over 10 years to build out their network for the granted GSA. The FCC should revoke the license and make it available to an entity that will meet the construction requirements.

### **Summary**

It's absolutely crucial that EBS is made available to the educational organizations in the state to provide the needed network access for educational organizations to better serve and provide 21st century learning opportunities and activities for students. Thank you for your consideration.

Sincerely,



Ray Timothy  
Chief Executive Officer, UETN