

Senator Maria Cantwell  
Chairwoman  
Senate Committee on Commerce, Science and Transportation  
511 Hart Senate Office Building  
Washington, D.C. 20510

Senator Roger F. Wicker  
Ranking Member  
Senate Committee on Commerce, Science and Transportation  
555 Dirksen Senate Office Building  
Washington, DC 20510

Dear Chairwoman Cantwell and Ranking Member Wicker,

We the undersigned 25 public interest and civil society groups, schools and libraries call on Congress to renew the Federal Communication Commission's spectrum auction authority in a way that promotes a vibrant, diverse wireless ecosystem. Taking a balanced approach will allow innovators, local anchor institutions, and technology companies, not just incumbent wireless providers, to access the spectrum they need to serve the American public.

As you know, Congress has extended the FCC's authority to auction spectrum until December 16 of this year. Congress should renew a further extension of the Commission's authority that does not prioritize exclusive use licensed spectrum over unlicensed or shared spectrum models. Limiting the Commission's auction authority in a manner that only allows the FCC to provide licensed spectrum access to mid-band spectrum for exclusive use is shortsighted. It would gift spectrum to a highly concentrated industry whose neglect of tribal lands and rural communities is only now being remedied by the widespread deployment of CBRS shared spectrum. Indeed, failing to provide more mid-band spectrum for CBRS-like sharing and for next generation Wi-Fi would further entrench incumbents by eliminating spectrum access for the incumbent carriers' most successful competitors. It would choke innovation in the fastest growing and most innovative segment of the wireless economy—private 5G networks.

By contrast, the surest way to maintain American leadership in the global wireless economy while enhancing affordable wireless access for all Americans is to provide the FCC with the tools it needs and flexibility to use these tools effectively. When the FCC authorized unlicensed spectrum access in the 1980s and early 1990s, it paved the way for Wi-Fi, Bluetooth, and other unlicensed technologies that enrich our lives. The FCC's authorization of database-managed spectrum sharing regimes, such as CBRS and TV Whitespaces, has enabled thousands of wireless ISPs—along with local schools and libraries and Native American tribes—to bring broadband to their local communities. This, in turn, has fostered economic development, access to telemedicine, and expanded educational opportunities in the least connected corners of rural America.

In every case, whether with spectrum auctions, unlicensed spectrum, or the new hybrid shared-access models (which are licensed-by-rule), the United States has led the world because the FCC has led the world as an innovative wireless regulator. The FCC is tasked with carefully curating the public airwaves to the benefit of *all* Americans. Congress should affirm the FCC's public interest charge and reject the self-interested pleadings of a single segment of the wireless industry—a segment that often chooses its own economic interest over the needs of serving everyone in a community, including rural and poor communities. Congress should also focus spectrum policy on promoting competition and innovation, instead of adopting policies that only further concentrate power in the hands of the existing wireless incumbents.

### **CBRS and Unlicensed Spectrum Help Close the Digital Divide and End the Homework Gap**

Among the most successful innovations of the FCC has been the introduction of CBRS shared spectrum. The FCC designated Spectrum Access System Administrators and closed the CBRS auction in 2020. Since then, the CBRS band has far exceeded expectations as a band for innovation and rural broadband access. Dozens of Tribes, schools and libraries, and other unconnected communities have incorporated CBRS into their wireless networks to enhance their communities' connectivity. The following examples demonstrate the diversity of CBRS end-users and the important role CBRS plays in serving communities neglected by the wireless industry:

- The Hoopa Tribe of California uses CBRS to deliver mobile and fixed wireless broadband access. Matthew Douglas, the broadband manager for Acorn Wireless (the ISP created to serve the Hoopa tribe), has stated that: “Without CBRS, we would be dead in the water when it comes to distributing broadband within our valley. Therefore, it is a 10/10 on the importance scale.”
- The Fort Worth Independent School District of Texas is deploying a fixed wireless broadband access network to reach students who cannot afford a broadband connection – as are other school districts in Texas, and school districts in Colorado, California and other states.
- The Lindsay Unified School District in Central California is deploying a “hetnet” combining CBRS, unlicensed spectrum, and licensed spectrum to ensure that students in the low-income farming community the district serves have access to broadband in their homes.

While the wireless industry may regard spectrum serving such communities as “wasted,” Congress should regard these uses as a success story to celebrate.

## **CBRS and Shared Access Models Expand Wireless Competition**

Even incumbents such as Verizon have incorporated PAL and GAA CBRS into their wireless networks to extend their coverage. While incumbents have found CBRS a useful supplement, cable operators plan to use CBRS as a means to compete with incumbents. Comcast and Charter have invested significant resources in order to use CBRS spectrum to augment their MVNO agreements with incumbent licensees. Using CBRS has allowed these (and other) cable operators to build networks that can compete head-to-head with the existing incumbents on both network quality and network price, which ultimately benefits consumers by increasing the quality and affordability of services.

Comcast and Charter have nearly 10 million subscribers, and continue to announce healthy subscriber growth. These competing providers need the expanded spectrum capacity of CBRS to maintain their network quality for their growing subscriber base, and to offer disruptive pricing plan. Small wonder that, given these competitive pressures, the wireless industry wishes to portray CBRS and other shared spectrum regimes as “failures.”

## **CBRS and the Rise of Private 5G Networks**

A driving force behind the creation of CBRS was to permit innovation and meet needs that the incumbent wireless carriers left unfilled. In this, CBRS continues to excel. The single greatest and most innovative area of growth for CBRS deployment lies in the area of private 5G networks. These small, privately operated networks take advantage of the numerous features in 5G largely neglected by the largest carriers, such as network slicing and enhanced IoT. Private networks provide users with secure communications channels in closed environments such as sports stadiums and corporate campuses. Some examples include:

- The National Football League uses CBRS to provide secure communications between coaches and players, and to supplement existing in-stadium Wi-Fi coverage.
- John Deere uses CBRS private networks in its factories to track inventory, collect manufacturing data to improve efficiency, and to train AI algorithms for predictive maintenance.
- The United States Marine Corps uses CBRS private networks for secure AR/VR training and to foster robotic and automated functions in warehouses.
- The City of Las Vegas and NTT have announced a partnership to build a city-wide CBRS-based private 5G network. This city-wide network will serve as an open platform for local businesses.

Private CBRS networks such as these are continuing to expand as businesses and providers gain experience with CBRS. A recent ABI research paper identified CBRS private networks as “an important building block” for what it calls “Industry 4.0”—the revolution in industrial processes, inventory tracking and shipping enabled by constant machine-to-machine communication in private networks.

### **Innovation and Competition Require More Unlicensed and Shared Spectrum**

As explained by Samsung, the chief source of “growing pains” for CBRS comes from the limited amount of available spectrum. The solution, of course, is to make more spectrum available to accommodate the ever-growing demand for shared spectrum. As CTIA is always quick to point out—the need for more spectrum to meet the voracious, ever-growing demand for it is a sign of success, not failure. Similarly, the demand for CBRS and unlicensed spectrum for gigabit Wi-Fi are not signs of failure, but rather signs of success. Sharing and unlicensed spectrum access models are essential to a thriving wireless ecosystem.

It is precisely because all segments of the wireless ecosystem have grown under the FCC’s balanced approach to expanding spectrum access that the Commission should continue to manage access to the public airwaves. The FCC has never hesitated to find exclusive-use spectrum for the wireless industry to distribute by auction. The FCC enabled the deployment of 5G by developing innovative clearing and auction strategies such as the broadcast incentive auction, the C-Band auction, and the 2.5 GHz auction (which also provided Tribes with exclusive licenses through the first-ever Tribal application window). At the same time—and over the loud and constant objections of CTIA and its members—the FCC *also* found spectrum to promote innovation and competition by developing CBRS to enable shared use of Navy radar spectrum and by unanimously adopting the 2020 Order to allow unlicensed sharing across the 6 GHz band to fuel the next generation of Wi-Fi.

Congress should allow the FCC to continue its successful stewardship of the public airwaves. Certainly Congress should re-authorize the FCC’s auction authority. But Congress should also recognize that auctioning exclusive-use spectrum licenses is not the only tool that the FCC needs to meet the diverse wireless needs of our country and maintain American leadership in wireless. Congress should likewise recognize that CBRS and unlicensed spectrum have helped fill in gaps left by the auction-driven wireless incumbents by allowing rural America and Native tribes to build their own networks. Congress must prevent the wireless industry from using the reauthorization of the FCC’s auction authority as a vehicle to choke off competition, crush innovation, and continue to neglect rural America. We urge you to re-authorize the FCC’s auction authority, while allowing the FCC to use **all** its tools to provide for our spectrum future.

Sincerely,

Public Knowledge

Institute for Local Self-Reliance

Access Humboldt

LinkOregon

American Library Association

MediaJustice

California State Library

National Digital Inclusion Alliance

Center for Rural Strategies

New York Public Library

Community Tech NY

Open Technology Institute at New America

Connect Waukegan (IL)

Pullman Public Schools (Washington)

Consortium for School Networking

Schools, Health and Libraries Broadband  
(SHLB) Coalition

DigitalC (Ohio)

Shreve Memorial Library (Louisiana)

Fresno Unified School District (California)

Utah Education and Telehealth Network

Friday Institute for Educational Innovation  
(North Carolina)

Washington State Library

Gigabit Libraries Network

Ysleta Independent School District (TX)

Hawaii Broadband and Digital Equity Office