

**Before the
Federal Communications Commission
Washington, DC 20554**

In the Matter of)	
)	
Amendment of Part 90 of the Commission's)	WP Docket No. 07-100
Rules)	

To: The Commission

**REPLY COMMENTS OF
THE WIRELESS INTERNET SERVICE PROVIDERS ASSOCIATION**

The Wireless Internet Service Providers Association (“WISPA”), pursuant to Sections 1.415 and 1.419 of the Commission’s Rules, hereby submits these reply comments in response to the Sixth Further Notice of Proposed Rulemaking in the above-captioned proceeding.¹

The comments filed in response to the *FNPRM* overwhelmingly agree that the 4.9 GHz band has fallen short of its potential and that changes to the way this band is managed and administered are urgently needed. Although some public safety commenters claim that public safety is making greater use of the band than the Commission acknowledges, they nevertheless concede that the current rules for the band are preventing greater, more effective use. These commenters further concede that, to the extent the band is being used by public safety, such use is primarily concentrated in major metropolitan areas, leaving the 4.9 GHz band unused or underused across vast areas of rural America.

WISPA therefore again urges the Commission to amend its eligibility rules to enable and promote efficient sharing of the 4.9 GHz band by public safety users on a primary basis and by commercial users on a secondary basis. This two-tiered sharing approach will facilitate increased

¹ *Amendment of Part 90 of the Commission’s Rules*, Sixth Further Notice of Proposed Rulemaking, WP Docket No. 07-100, FCC 18-33 (rel. March 23, 2018) (“*FNPRM*”). WISPA filed Comments in this proceeding on July 6, 2018. See Comments of the Wireless Internet Service Providers Association, WP Docket No. 07-100 (filed July 6, 2018) (“*WISPA Comments*”).

use of the 4.9 GHz band and encourage a more robust market for equipment and greater innovation, while protecting primary public safety users from harmful interference. In addition to preserving public safety access to the band, two-tiered sharing will help enable the important public interest benefits of rural broadband deployment to be realized.

Discussion

I. THE COMMISSION SHOULD ALLOW SECONDARY COMMERCIAL USE OF THE 4.9 GHz BAND ON A SHARED BASIS WITH PUBLIC SAFETY LICENSEES

A review of the record demonstrates that, as WISPA describes in its comments, adopting a two-tiered sharing approach will best balance the Commission’s goals of facilitating increased use of the 4.9 GHz band, encouraging a more robust market for equipment and greater innovation, and protecting public safety users from interference while not compromising the integrity or security of public safety operations.

A number of commenters – including public safety entities – support the concept of two-tiered sharing. The Association of Public-Safety Communications Officials-International (“APCO”) states that the two-tiered sharing approach “has the potential to achieve the Commission’s spectrum efficiency goals and create opportunities for incumbents and new entrants alike in the 4.9 GHz band.”² The Florida Region 9 Committee (the NPSPAC Regional Planning Committee for State of Florida) similarly recognizes two-tiered sharing as “a possible solution to create more use of the band.”³ GeoLinks, like WISPA, also believes that “allowing commercial users to share the band on a secondary basis to public safety licensees would be the most appropriate and most effective use of the band to reach the Commission’s goal.”⁴ In

² Comments of the Association of Public-Safety Communications Officials-International, WP Docket No. 07-100 (filed July 6, 2018) (“APCO Comments”), at 15 – 16.

³ Comments of the Florida Region 9 Committee, WP Docket No. 07-100 (filed July 6, 2018), at 1.

⁴ Comments of California Internet, L.P. d/b/a GeoLinks, WP Docket No. 07-100 (filed July 6, 2018) (“GeoLinks Comments”), at 2. GeoLinks proposes that secondary use of the band be on a licensed or

addition, Federated Wireless provides extensive discussion in its comments as to why a sharing regime “is the most efficient, most economical, and lowest risk option” for fulfilling each of the Commission’s stated goals for the 4.9 GHz band.⁵

Those commenters who raise objections to sharing either ignore or baselessly dismiss a key element of the two-tiered approach – namely, that dynamic sharing through the use of an automated spectrum management system would ensure that public safety would always have access to the band and would always have priority over and interference protection from any non-public safety user of the band.⁶ As discussed below in these reply comments, no other alternative raised by the Commission would achieve this outcome.

WISPA agrees with Federated Wireless that dynamic sharing of spectrum is already well understood and that concerns raised in the past as to whether an automated spectrum management system would provide sufficient real-time protection for Tier 1 operations are not valid.⁷ According to Federated Wireless:

As extensive testing of CBRS has shown, dynamic sharing databases are capable of enforcing a priority access regime while coordinating thousands of simultaneous connections without harmful interference occurring. Because public safety users can be classified with Tier 1 priority status (and because a dynamic spectrum controller can enforce priority access for public safety networks by classifying users) there is virtually zero threat that first responders and others will not be able to access the spectrum interference free when needed. Indeed, the Navy and other DoD users have extensively vetted dynamic spectrum sharing and

lightly-licensed basis; however, dynamic sharing through an automated spectrum management system would provide better, real-time protection to incumbents and assurance of priority access for public safety than would a licensing or light-licensing approach that would rely on the ULS database.

⁵ Comments of Federated Wireless, Inc., WP Docket No. 07-100 (filed July 6, 2018) (“Federated Wireless Comments”). WISPA generally agrees with Federated Wireless regarding tiered sharing, but disagrees with Federated Wireless’ proposal to introduce a third “intermediate” tier for critical information infrastructure (“CII”), which would unnecessarily complicate the management of the band.

⁶ See WISPA Comments at 5 – 6; Federated Wireless Comments at 11. See also APCO Comments at 15 (“APCO is not opposed to sharing so long as public safety users retain continuous priority access to the band.”).

⁷ See WISPA Comments at 5 – 6; Federated Wireless Comments at 6 and 11.

concluded that it does not present a material risk of interference to mission critical operations.⁸

In addition to efficiently and effectively managing dynamic, secondary use of the spectrum, an automated spectrum management system can be leveraged to facilitate the regional planning process for public safety use of the 4.9 GHz band,⁹ as well as to provide effective real-time coordination among public safety users of the band, thus addressing many of coordination problems that public safety commenters have identified under the current rules.¹⁰

Various commenters also agree with WISPA that a tiered sharing approach would achieve the Commission's goal of encouraging a more robust market for equipment and innovation. According to APCO, "sharing the band for commercial use has the potential to significantly increase equipment options" and "encourage equipment manufacturers to innovate and develop an expanded device ecosystem for the band."¹¹ As WISPA explains in its initial comments, the development of an equipment ecosystem would facilitate the introduction of new, lower-cost equipment and encourage innovation among competing equipment vendors and service providers, to the benefit of all users of the band, particularly public safety, and to the public they serve.¹²

Adopting the proposed two-tiered sharing approach also would advance other significant policy priorities, particularly the promotion of rural broadband deployment and the bridging of the digital divide. WISPA and GeoLinks explain in their comments that fixed wireless technology "eliminates the need for costly, time-consuming and disruptive construction that is

⁸ Federated Wireless Comments at 11.

⁹ *See id.* at 10.

¹⁰ *See, e.g.,* Comments of the National Regional Planning Council, WP Docket No. 07-100 (filed July 3, 2018), at 2 ("One of the primary issues preventing wider spread use of the band by public safety is the lack of frequency coordination for licensing and use of the band."); Comments of the City of New York, WP Docket No. 07-100 (filed July 5, 2018) at 3 and 6.

¹¹ APCO Comments at 15 – 16. *See also* Federated Wireless Comments at 5 – 6 and 17.

¹² *See* WISPA Comments at 6 – 7.

associated with fiber buildouts” and is the most cost-effective last-mile solution in many unserved areas.¹³ And while it expresses reluctance to extend eligibility for the 4.9 GHz band beyond public safety at this time, the State of Maryland nevertheless recognizes the importance of meeting the public interest need for rural broadband deployment and the bridging of the digital divide.¹⁴ As it acknowledges in its comments, “[b]y State policy, Maryland supports programs that extend broadband access into rural and under-served communities and the use of this spectrum could be an important part of that initiative.”¹⁵

Finally, several commenters addressed various proposed changes to the Commission’s technical rules for the 4.9 GHz band. Although it takes no specific position at this time with respect to these proposals, WISPA urges the Commission in general to adopt technical rules that facilitate approval of equipment that also operates on nearby 5 GHz U-NII bands. The proximity of the 4.9 GHz band to the 5 GHz U-NII bands, along with the bands’ similar propagation characteristics, would further encourage development of an equipment ecosystem if the rules for these bands are in close alignment, and would also allow equipment to be seamlessly deployed across either or both of the 4.9 GHz and 5 GHz bands without extensive engineering cost.¹⁶

II. THE RECORD SHOWS THAT THE TWO-TIERED SHARING APPROACH IS THE BEST ALTERNATIVE FOR MOVING FORWARD WITH THE 4.9 GHz BAND

In the *FNPRM*, the Commission requested comment on various alternatives for increasing use of the 4.9 GHz band, including extending eligibility to CII on a co-primary basis; allowing public safety licensees to lease spectrum capacity to non-public safety users; and

¹³ GeoLinks Comments at 2. *See also* WISPA Comments at 7 – 8. GeoLinks notes that in addition to benefitting broadband deployment in rural and high-cost areas, fixed wireless technology also “can provide much-needed competition to incumbent providers in urban and suburban areas.” GeoLinks Comments at 2.

¹⁴ Comments of the State of Maryland, WP Docket No. 07-100 (filed July 6, 2018), at 8.

¹⁵ *Id.*

¹⁶ *See* Comments of the Wi-Fi Alliance, WP Docket No. 07-100 (filed July 6, 2018), at 3 – 4.

redesignating the band for commercial wireless use.¹⁷ The record developed in response to the *FNPRM* shows that the two-tiered sharing approach is the best alternative for moving forward and achieving the Commission’s goals for the 4.9 GHz band.

A number of commenters oppose the various alternatives proposed by the Commission and refuse to accept anything other than a marginal expansion of use of the 4.9 GHz band under strict conditions, if at all.¹⁸ Maintaining these regulatory blinders, however, will do nothing to resolve the serious nationwide underutilization of the band, especially in rural areas where broadband demand is unmet, nor will the other rule changes being urged by these commenters be sufficient to resolve other significant obstacles to public safety use of the band, such as access to affordable equipment and innovative technologies.

Commenters from the CII sector ask the Commission to expand eligibility to use of the 4.9 GHz band on a co-primary basis, but only to their specific industry.¹⁹ However, as WISPA previously observed, the allocation of spectrum to a specific industry runs directly counter to the Commission’s general policy favoring flexible use of spectrum, and extending eligibility *only* to CII would not be sufficient to create the economies of scale and equipment ecosystem necessary to spur innovation and the introduction of lower-cost equipment.²⁰ Moreover, licensing this spectrum on a co-primary basis would make less protected spectrum available to public safety,

¹⁷ *FNPRM* at ¶¶ 66 – 86.

¹⁸ See, e.g., Comments of the Public Safety Communications Council, WP Docket No. 07-100 (filed June 27, 2018) (“PSCC Comments”); Comments of the San Francisco Bay Area Rapid Transit District, WP Docket No. 07-100 (filed July 6, 2018) (“BART Comments”); Comments of the San Francisco Bay Area Regional Interoperable Communications Systems Authority (BayRICS), WP Docket No. 07-100 (filed July 5, 2018) (“BayRICS Comments”).

¹⁹ See Comments of the Utilities Technology Council, the Edison Electric Institute, the National Rural Electric Cooperative Association and the Gridwise Alliance, WP Docket No. 07-100 (filed July 6, 2018) (“UTC/EEI/NRECA/Gridwise Comments”); Comments of Southern Company Services, Inc., WP Docket No. 07-100 (filed July 6, 2018) (“Southern Company Comments”); Comments of the Enterprise Wireless Association, WP Docket No. 07-100 (filed July 6, 2018) (“EWA Comments”).

²⁰ See WISPA Comments at 8.

especially if co-primary licensing were to be extended to all private internal systems as EWA urges.²¹ By contrast, the two-tier sharing approach supported by WISPA would ensure primary public safety use of the band in all cases.

Several commenters agree with WISPA that allowing public safety licensees to lease spectrum capacity to non-public safety users is a poor option with numerous problems.²² For example, APCO and Southern Company point to the complexity of issues and variables that would have to be addressed under a leasing approach, as well as the significant cost and uncertainty of managing and monitoring leasing agreements.²³ APCO expresses particular concern that “[p]ublic safety licensees are not suited, and should not be put in a position to weigh monetizing their spectrum in exchange for operational usefulness.”²⁴ EWA does not object to leasing to other public safety entities, but opposes any leasing to commercial or business users because this would create an arbitrage opportunity that “defeats the purpose of designating spectrum for public safety use in the first place.”²⁵ UTC, EEI, NRECA and Gridwise further caution that “once the spectrum is leased, history in other bands has shown that it would be hard for public safety to ever get the band back.”²⁶

²¹ See EWA Comments at 1 – 2.

²² See, e.g., APCO Comments at 16; Southern Company Comments at 11 – 12; EWA Comments at 10; UTC/EEI/NRECA/Gridwise Comments at 20; Federated Wireless Comments at 8.

²³ See APCO Comments at 16; Southern Company Comments at 11 – 12. See also Federated Wireless Comments at 8 (“... the option of allowing public safety agencies to lease spectrum to CII or other commercial entities would make public safety agencies that have no existing mechanisms for spectrum leasing, or experience negotiating or managing spectrum lease deals, responsible for these transactions. In practice, such an arrangement would result in an inconsistent, inefficient, and administratively burdensome patchwork of leasing processes managed by agencies that are not equipped for such functions.”).

²⁴ APCO Comments at 16.

²⁵ EWA Comments at 10.

²⁶ UTC/EEI/NRECA/Gridwise Comments at 20.

Finally, every commenter that addressed the issue agrees with WISPA in opposing redesignation of the 4.9 GHz band for commercial wireless purposes.²⁷ As the record shows, redesignating the 4.9 GHz band would effectively eliminate this band as a viable option for public safety and would seriously curtail its availability to other potential non-public safety users, both commercial and non-commercial.

Conclusion

WISPA continues to recommend adoption of the Commission's proposal to expand eligibility for the 4.9 GHz band to commercial users on a secondary basis, subject to appropriate safeguards to protect and preserve primary public safety use. As the record demonstrates, this two-tiered sharing approach best serves the public interest by facilitating increased use of the band, especially in rural areas, encouraging a more robust market for equipment, and stimulating innovation without compromising the security and integrity of public safety operations.

Respectfully submitted,

WIRELESS INTERNET SERVICE PROVIDERS ASSOCIATION

By: /s/ Claude Aiken
Claude Aiken, President/CEO

Stephen E. Coran
Lerman Senter PLLC
2001 L Street, NW, Suite 400
Washington, DC 20036
(202) 416-6744

Counsel to the Wireless Internet Service Providers Association

August 6, 2018

²⁷ See WISPA Comments at 9 – 10; APCO Comments at 14 – 15; Federated Wireless Comments at 8 – 9; Southern Company Comments at 15; PSCC Comments at 3; BART Comments at 12; BayRICS Comments at 4; Comments of the American Association of State Highway and Transportation Officials, WP Docket No. 07-100 (filed July 3, 2018) at 4; Comments of the National Public Safety Telecommunications Council, WP Docket No. 07-100 (filed July 6, 2018), at 4 and 27.