

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

In the Matter of)	
)	
Use of Spectrum Bands Above 24 GHz For)	GN Docket No. 14-177
Mobile Radio Services)	
)	
Establishing a More Flexible Framework to)	IB Docket No. 15-256
Facilitate Satellite Operations in the 27.5-28.35)	
GHz and 37.5-40 GHz Bands)	
)	
Amendment of Parts 1, 22, 24, 27, 80, 90, 95,)	WT Docket No. 10-112
and 101 To Establish Uniform License Renewal,)	
Discontinuance of Operation, and Geographic)	
Partitioning and Spectrum Disaggregation)	
and Policies for Certain Wireless Radio Services)	
)	
Allocation and Designation of Spectrum for)	IB Docket No. 97-95
Fixed-Satellite Services in the 37.5-38.5 GHz,)	
40.5-41.5 GHz and 48.2-50.2 GHz Frequency)	
Bands; Allocation of Spectrum to Upgrade Fixed)	
and Mobile Allocations in the 40.5-42.5 GHz)	
Frequency Band; Allocation of Spectrum in the)	
46.9-47.0 GHz Frequency Band for Wireless)	
Services; and Allocation of Spectrum in the 37.0-)	
38.0 GHz and 40.0-40.5 GHz for Government)	
Operations)	

To: The Commission

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

The Wireless Internet Service Providers Association (“WISPA”) submits these reply comments in response to the *Spectrum Frontiers Second Further Notice of Proposed Rulemaking* (“*Frontiers Second FNPRM*”)¹ to urge the Commission to take steps to ensure that there is competitive access to millimeter wave (“mmW”) bands and associated equipment ecosystem.

¹ *Use of Spectrum Bands Above 24 GHz, et al.*, Second Report and Order, Second Further Notice of Proposed Rulemaking, Order on Reconsideration, and Memorandum Opinion and Order, 32 FCC Rcd 10988 (2017) (“*Frontiers Second R&O and Second FNPRM*”).

Specifically, WISPA strongly urges the Commission to retain its pre-auction mobile spectrum holdings review in the 28, 37, and 39 GHz bands, and to require equipment operability across the 24 and 25 GHz bands (24.25-24.45 / 24.75-25.25 GHz). In addition, in response to comments from a number of parties, WISPA reiterates its strong support for ensuring shared access to the 37-37.6 GHz band.

Discussion

The evolution to 5G is an opportunity for a variety of technologies, industries, and service providers to share in the development and deployment of these advanced services. The Commission's recent *Internet Access Service Report* found that 85 percent of developed census blocks have only one or no providers offering service of at least 100 Mbps downstream/10 Mbps upstream. Combined with high-capacity mid-band spectrum, fixed wireless broadband service providers can leverage mmW bands to drive higher speed broadband service deeper into the United States. But, these providers need a fair chance to access spectrum at auction and in shared bands, and to leverage the equipment scale driven by larger providers. The Commission should take the necessary steps to promote competitive access to spectrum and equipment so that WISPs can be a part of the 5G future and help further enhance broadband delivery across the country.

I. THE COMMISSION SHOULD AFFIRM ITS DECISION TO CONDUCT PRE-AUCTION REVIEW OF SPECTRUM HOLDING LIMITATIONS IN THE 28, 37, AND 39 GHz BANDS

Limiting spectrum holdings is one of the Commission's most important tools to ensure the fair assignment of spectrum to a diversity of service providers, and has long been a part of the Commission's competition toolkit.² Absent spectrum holdings limitations, the Commission

² See *Policies Regarding Mobile Spectrum Holdings; Expanding Economic and Innovation Opportunities of Spectrum Through Incentive Auctions*, Report and Order, 29 FCC Rcd 6133, 6137-43 ¶¶ 7-16 (2014) ("Mobile Spectrum Holdings R&O").

cannot effectively “promot[e] economic opportunity and competition and ensur[e] new and innovative technologies are readily accessible to the American people by avoiding excessive concentration of licenses by disseminating licenses among a wide variety of applicants” as required by Section 309(j) of the Communications Act of 1934, as amended.³ As Starry asserts, robust access to spectrum is necessary for providers to effectively compete – it is *the* critical input in a fixed wireless broadband network.⁴

WISPA agrees with the Competitive Carriers Association that the Commission has an opportunity now, before technology and services are fully deployed, to avoid the anti-competitive behavior that evidence suggests will always occur.⁵ Larger, more capitalized providers have an economic incentive to use all means to limit competitors’ access to spectrum. This has happened time and time again. Most recently, the mobile wireless industry has tried aggressively to reconfigure the Citizens Broadband Radio Service to minimize opportunities for more localized providers to gain access to licensed spectrum.⁶

Arguments that spectrum holdings limits will somehow result in inefficient spectrum assignment or the lack of investment are completely unfounded.⁷ The fact that mobile wireless

³ 47 U.S.C. § 309(j)(3)(B).

⁴ See Comments of Starry, Inc., GN Docket No. 14-177, *et al.* (filed Jan. 23, 2018) (“Starry Comments”), at 2. See also *Mobile Spectrum Holdings R&O*, 29 FCC Rcd at 6142-44 ¶ 17; *Use of Spectrum Bands Above 24 GHz*, *et al.*, Report and Order and Further Notice of Proposed Rulemaking, 31 FCC Rcd 8014, 8078 ¶ 178 (2016) (“*Frontiers First R&O and FNPRM*”).

⁵ Comments of the Competitive Carriers Association, GN Docket No. 14-177, *et al.* (filed Jan. 23, 2018) (“CCA Comments”), at 5-8.

⁶ See CTIA, Petition for Rulemaking, GN Docket No. 12-354, RM-11788 (filed June 16, 2017); T-Mobile USA, Inc. Petition for Rulemaking, GN Docket No. 12-354, RM-11789 (filed June 19, 2017). See also Reply Comments of the Wireless Internet Service Providers Association, GN Docket No. 17-258 (filed Jan. 29, 2018), at 1-6 (arguing that the rule changes that large mobile wireless providers seek in the CBRS “would drive up the costs of initial license procurement, and thereby limit the pool of bidders, forcing out smaller and more innovative spectrum users that do not require large geographic areas to implement their business plan.”).

⁷ See Comments of Verizon, GN Docket No. 14-177, *et al.* (filed Jan. 23, 2018), at 5.

providers are unable to predict the total quantity of spectrum they may need right now for the future into perpetuity is not a reason to allow them to control all that is available today.⁸ As mobile providers have pointed out in other contexts, there is a secondary market for spectrum in which they can, if needed, acquire additional spectrum resources over time.⁹ In addition, the Commission has consistently made new spectrum bands available through additional auctions – the first mmW “5G” auction will not be the last.

The record supports conducting spectrum holding review *before* the auction for each of the 28, 37, and 39 GHz bands begin.¹⁰ By doing so, the Commission will facilitate a competitive auction in which large incumbents are able to secure the spectrum they need, ensure competitive providers and new entrants are given a chance at winning licenses, and provide all bidders with the necessary information to ensure a fair and efficient auction.¹¹

II. THE COMMISSION MUST ENSURE A ROBUST ECOSYSTEM OF EQUIPMENT AVAILABLE TO ALL PROVIDERS IN THE 24 GHz BAND

Even if there is competitive access to mmW spectrum, access to the equipment ecosystem is still necessary for competitive providers to put spectrum to use to benefit all Americans. The Commission has learned from past mistakes and made operability a priority in spectrum bands it has made available since the 700 MHz band.¹² There is strong record support from both

⁸ *See id.*

⁹ *See, e.g.,* Comments of AT&T Services, Inc., GN Docket No. 17-258 (filed Dec. 28, 2017), at 8; Comments of Verizon, GN Docket No. 17-258 (filed Dec. 28, 2017), at 14.

¹⁰ *See* CCA Comments at 5-8; Starry Comments at 2-4; Comments of the United States Cellular Corporation, GN Docket No. 14-177, *et al.* (filed Jan. 23, 2018) (“USCC Comments”), at 6-10.

¹¹ *See* Starry Comments at 3-4.

¹² *See Service Rules for Advanced Wireless Services H Block – Implementing Section 6401 of the Middle Class Tax Relief and Job Creation Act of 2012 Related to the 1915-1920 MHz and 1995-2000 MHz Bands*, Report and Order, 28 FCC Rcd 9483, 9498 ¶ 32 (2013); *Amendment of the Commission's Rules with Regard to Commercial Operations in the 1695-1710 MHz, 1755- 1780 MHz, & 2155-2180 MHz Bands*, Report and Order, 29 FCC Rcd 4610, 4698-99 ¶¶ 229-30 (2014); *Amendment of the Commission's Rules with Regard to Commercial Operations in the 3550-3650 MHz Band*, WT Docket 12-354, Report

providers and equipment vendors to extend the operability rule from other mmW bands¹³ to the 24 GHz band.¹⁴

Unlike other mmW bands, the 24 GHz band is split into two band segments, the 24.25-24.45 GHz band and the 24.75-25.25 GHz band. Auction dynamics suggest that smaller competitive providers may be priced down into the lower band segment – with only 200 megahertz, it could be disfavored by large providers. If the lower band segment is largely populated by competitive providers and the upper segment by larger incumbents, the incumbents will have no incentive to drive the development of equipment capable of operating in the lower band segment. The Commission has seen this before, and it took nearly five years to resolve.¹⁵ The Commission can avoid this problem from the outset by extending the existing mmW operability rule to the 24 GHz band.

III. THE COMMISSION SHOULD CONTINUE TO REJECT CALLS TO AUCTION THE 37-37.6 GHz BAND AND FINALIZE THE RULES FOR SHARING

While outside of the scope of the *Second Frontiers FNPRM*, WISPA continues to strongly urge the Commission to finalize the rules for shared access to the 37-37.6 GHz band and

and Order and Second Further Notice of Proposed Rulemaking, 30 FCC Rcd 3959, 4030-31 ¶¶ 227-29 (2015); *Frontiers First R&O and FNPRM*, 31 FCC Rcd at 8127 ¶¶ 231-24.

¹³ 47 C.F.R. § 30.208; *Frontiers First R&O and FNPRM*, 31 FCC Rcd at 8127 ¶¶ 231-24.

¹⁴ Comments of AT&T, GN Docket No. 14-177, *et al.* (filed Jan. 23, 2018), at 10-11; CCA Comments at 5-8; Comments of Nokia, GN Docket No. 14-177, *et al.* (filed Jan. 23, 2018), at 4; Starry Comments at 5; Comments of T-Mobile, GN Docket No. 14-177, *et al.* (filed Jan. 23, 2018), at 10; USCC Comments at 2-5.

¹⁵ *See Inquiry Into the Use of the Bands 825-845 MHz and 870-890 MHz for Cellular Communications Systems; and Amendment of Parts 2 and 22 of the Commission's Rules Relative to Cellular Communications Systems*, Report and Order, 86 FCC 2d 469, 482 (1981); *Promoting Interoperability in the 700 MHz Commercial Spectrum; Requests for Waiver and Extension of Lower 700 MHz Band Interim Construction Benchmark Deadlines*, Report and Order, 28 FCC Rcd 15122 (2013) ; Public Notice, *Auction of 700 MHz Band Licenses Closes*, 23 FCC Rcd 4572 (2008).

dismiss the pending petitions for reconsideration.¹⁶ There is overwhelming record support representing a diverse set of providers and interests to maintain just a small portion of the licensed mmW spectrum for shared access between commercial users, and commercial and federal users.¹⁷ As the Commission recognized when it established the sharing regime for the 37-37.6 GHz band, it offers an opportunity to provide low-barrier access to spectrum for new technologies and providers while also enhancing shared access methods and technologies between commercial and federal users.¹⁸

Maintaining shared access to only a small portion of the mmW spectrum available for 5G services comes at no cost to other licensed users and offers a path to enhance economic activity and competition in the development and deployment of 5G technologies.

¹⁶ See Wireless Internet Service Providers Association *Ex Parte*, GN Docket No. 14-177, *et al.* (filed Nov. 2, 2017).

¹⁷ See Dynamic Spectrum Alliance, *Letter*, GN Docket No. 14-177, *et al.* (filed Nov. 9, 2017); Marvell Semiconductor, Inc. *Letter*, GN Docket No. 14-177, *et al.* (filed Nov. 6, 2017); NCTA-The Internet & Television Association *Comments*, GN Docket No. 14-177, *et al.* (filed Sept. 30, 2016); Open Technology Institute, Consumers Union, and Public Knowledge *Ex Parte*, GN Docket No. 14-177, *et al.* (filed Nov. 7, 2017); Starry, Inc., *Letter*, GN Docket No. 14-177, *et al.* (filed June 1, 2017); Starry, Inc., *Letter*, GN Docket No. 14-177, *et al.* (filed Nov. 9, 2017).

¹⁸ *Frontiers First R&O and FNPRM*, 31 FCC Rcd at 8060 ¶ 113.

Conclusion

The Commission can help ensure a competitive 5G landscape by maintaining pre-auction review of mobile spectrum holdings in the 28, 37, and 39 GHz bands, requiring that equipment in the 24 GHz band be capable of operating across both band segments, and finalizing the rules for shared spectrum access in the 37-37.6 GHz band.

Respectfully submitted,

**WIRELESS INTERNET SERVICE
PROVIDERS ASSOCIATION**

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By: */s/ Chuck Hogg, Chairman*
/s/ Mark Radabaugh, FCC Committee Chair

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