

**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, 74, 80, 90,)	WT Docket No. 10-112
95, and 101 to Establish Uniform License)	
Renewal, Discontinuance of Operation, and)	
Geographic Partitioning and Spectrum)	
Disaggregation Rules 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)	

VERIZON’S REPLY COMMENTS

The record supports and provides additional proposals to promote investment and innovation in the millimeter wave bands.¹ Given the early stage of technological development in these bands, Verizon joins other commenters in calling for the Commission to continue to

¹ See *Use of Spectrum Bands Above 24 GHz for Mobile Radio Services*, Second Report and Order, Second Further Notice of Proposed Rulemaking, Order on Reconsideration, and Memorandum Opinion and Order, 32 FCC Rcd 10,988 (“*Second Further Notice*” or “*Second Report and Order*”).

evaluate flexible performance metrics that will encourage new, innovative use cases to flourish. At the same time, the Commission should harmonize auction rules across the millimeter bands by eliminating the spectrum cap on the amount of 28, 37, and 39 GHz band spectrum that a bidder can acquire in an auction, consistent with its decision not to adopt such a cap for the 24 and 47 GHz bands.

I. THE RECORD SUPPORTS EMBRACING FLEXIBLE PERFORMANCE APPROACHES THAT ENCOURAGE INNOVATION.

Commenters recognize that the Commission’s traditional buildout metrics (fixed links, population-based area coverage, or some combination thereof) may not be a good fit for 5G that may include IoT offerings, low power deployments, or other innovative services. Commenters clearly state that additional flexible options are needed.² We supported the Commission’s proposal to add an alternative performance metric based on geographic area coverage, which could account for innovative networks deployed along lines other than residential population.³ CCA similarly recognized that “a geographic-based performance metric is preferable as these relevant technologies develop,” and urged the FCC to consider adopting different performance requirements for different services as uses in the bands evolve.⁴

² See, e.g., Comments of AT&T Services, Inc., GN Docket No. 14-177, at 7-8 (Jan. 23, 2018) (“AT&T Comments”); Comments of Competitive Carriers Association (CCA), GN Docket No. 14-177, at 3-4 (Jan. 23, 2018) (“CCA Comments”); Comments of the Consumer Technology Association (CTA), GN Docket No. 14-177, at 6 (Jan. 23, 2018) (“CTA Comments”); Comments of CTIA, GN Docket No. 14-177, at 11-12 (Jan. 23, 2018) (“CTIA Comments”); Comments of Huawei Technologies Co., Ltd., GN Docket No. 14-177, at 5-6 (Jan. 23, 2018) (“Huawei Comments”); Comments of Verizon, GN Docket No. 14-177, at 2-3 (Jan. 23, 2018) (“Verizon Comments”).

³ *Id.* at 2-4.

⁴ See CCA Comments at 4.

Other commenters also stressed the need for flexible approaches that avoid hindering innovation and the development of new services. CTIA proposed adoption of a “representative, non-exhaustive list of flexible options for providers to sufficiently satisfy their performance requirements.”⁵ These options could include a combination of coverage and links that are met; an average number of connections; an average number of IP sessions; and deployment of 500 fixed and mobile access points per 50,000 in population.⁶ AT&T also proposes broadening the UMFUS construction rules to include a substantial service regime.⁷ Others similarly supported a safe harbor approach “to enable IoT service deployments to begin in these bands.”⁸ And still others agreed that the Commission should commit to revisiting the issue of performance metrics and alternative applications once uses of the band are more fully developed.⁹

All of these approaches have merit and should be considered by the Commission. To avoid impeding innovation, the Commission should immediately add to its list of performance options a geographic-based approach, as proposed in the *Second Further Notice*. At the same time, it should explore adopting a list of flexible performance options or safe harbors, while committing to monitor marketplace developments and revisit performance and buildout requirements as use cases are further defined. By taking these steps, the Commission will offer

⁵ CTIA Comments at 12.

⁶ See Comments of CTIA, GN Docket No. 14-177, at 18 (Sept. 30, 2016), *cited in* Huawei Comments at 6 n.15.

⁷ AT&T Comments at 8.

⁸ Huawei Comments at 5-6; *see* CTA Comments at 6; *see also* AT&T Comments at 8 (supporting the development of tailored safe harbors as use cases are further defined).

⁹ *See* AT&T Comments at 8; Huawei Comments at 6; Comments of T-Mobile USA, Inc., GN Docket No. 14-177, at 9 (Jan. 23, 2018).

companies the flexibility to deploy new and innovative networks and encourage greater investment in the millimeter wave bands.

II. THE COMMISSION SHOULD HARMONIZE AUCTION RULES ACROSS MILLIMETER WAVE BANDS TO PROMOTE EFFICIENT SPECTRUM USE.

The Commission should harmonize its auction rules across the millimeter wave bands by eliminating the pre-auction spectrum cap of 1250 megahertz for the 28 GHz, 37 GHz, and 39 GHz bands.¹⁰ In this proceeding, the Commission correctly determined that pre-auction limits are not necessary for the 24 GHz and 47 GHz bands given the early stage of development in these bands and the 4,950 megahertz of millimeter wave spectrum being made available for flexible use.¹¹ These same findings, as well as principles of regulatory parity, support eliminating the pre-auction limits for the 28 GHz, 37 GHz, and 39 GHz bands.¹²

Commenters who support keeping the pre-auction cap in place rely on purely speculative and hypothetical concerns¹³ that cannot justify prophylactic, investment-killing regulation.¹⁴

¹⁰ See *Second Further Notice*, ¶ 105; AT&T Comments at 8-9.

¹¹ *Second Report and Order* ¶ 73.

¹² See AT&T Comments at 8-9; Verizon Comments at 5-6.

¹³ See CCA Comments at 6-8 (expressing concern about the “ability” of wireless carriers with unlimited resources to “emerge” as dominant players); Comments of Starry, Inc., GN Docket No. 14-177, at 3-4 (Jan. 23, 2018) (“Starry Comments”) (discussing the need to “minimize the likelihood” of sub-optimal auction results); Comments of United States Cellular Corporation (USCC), GN Docket No. 14-177, at 7-8 (Jan. 23, 2018) (“USCC Comments”) (referencing “likely” spectrum acquisitions that will “shut[] out smaller carriers”).

¹⁴ See, e.g., *Restoring Internet Freedom*, Declaratory Ruling, Report and Order, and Order, WC Docket No. 17-108, FCC 17-166, ¶ 116 (rel. Jan. 4, 2018) (“We do not believe hypothetical harms, unsupported by empirical data, economic theory, or even recent anecdotes, provide a basis for [heavy-handed] regulation ...”); *Authorizing Permissive Use of the “Next Generation” Broadcast Television Standard*, Report and Order and Further Notice of Proposed Rulemaking, 32 FCC Rcd 9930, at n.231 (2017) (“[C]ommenters ... offered [no] evidence or substantiation to support their speculative assertions about such harm In the absence of such evidence, we decline to ... address their conclusory assertions.”).

Indeed, they fail to provide “a clear indication that they are necessary to address a specific competitive concern.”¹⁵ While opponents cite to recent secondary market transactions as support for their claims,¹⁶ they fail to demonstrate actual harm or market failure – for example, that these transactions foreclosed other carriers from acquiring needed millimeter wave spectrum. In fact, USCC concedes that the transactions it cites do not involve levels of millimeter wave spectrum exceeding the aggregation threshold that triggers further review of secondary market transactions.¹⁷ Nor do opponents meaningfully rebut the fact that the Commission is making available nearly 5,000 megahertz of millimeter wave spectrum for flexible use, and that it has found that the large pool of available spectrum is an effective constraint that addresses any competitive concern in the auction context.¹⁸

Opponents also fail to demonstrate the need to impose a post-auction, case-by-case review of millimeter wave spectrum holdings.¹⁹ As the record indicates, “there is no record of any FCC auction resulting in any degree of anticompetitive harm, notwithstanding the absence of spectrum caps or post-auction, case-by-case review.”²⁰ Requiring applicants to bid at auction without the certainty of knowing they would receive licenses on which they were winning bidder

¹⁵ *Second Report and Order* ¶ 73.

¹⁶ See CCA Comments at 7 & n.17; USCC Comments at 8.

¹⁷ USCC Comments at 8; cf. AT&T Comments at 10 (“AT&T agrees ... that the Commission should continue its practice of conducting case-by-case review of secondary market spectrum acquisitions.”).

¹⁸ *Second Report and Order* ¶ 73. To the extent commenters seek to revisit the Commission’s decision in the *Second Report and Order* not to adopt pre-auction limits in the 24 GHz and 47 GHz bands, their complaints should have been filed as petitions for reconsideration and should be dismissed here. See 47 C.F.R. § 1.429.

¹⁹ See CCA Comments at 6-7; Starry Comments at 4; USCC Comments at 9-10.

²⁰ AT&T Comments at 9.

“would complicate the auction process and may temper participation and competition in the auction.”²¹ Instead, the Commission should continue to monitor the evolution of 5G and the structure of millimeter wave spectrum holdings, and could pursue aggregation issues in the future if needed to address a specific and demonstrable competitive concern.²²

Respectfully submitted,

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²¹ *Id.* at 9-10; *see also* Verizon Comments at 7.

²² *See id.* at 8.