

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554**

In the Matter of:	)	
	)	
Use of Spectrum Bands Above 24 GHz For Mobile Radio Services	)	GN Docket No. 14-177
	)	
Establishing a More Flexible Framework to Facilitate Satellite Operations in the 27.5-28.35 GHz and 37.5-40 GHz Bands	)	IB Docket No. 15-256
	)	
Amendment of Parts 1, 22, 24, 27, 74, 80, 90, 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	)	WT Docket No. 10-112
	)	
Allocation and Designation of Spectrum for 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	)	IB Docket No. 97-95
	)	

**REPLY COMMENTS OF AT&T SERVICES, INC.**

**I. INTRODUCTION AND SUMMARY**

AT&T Services, Inc., on behalf of the subsidiaries and affiliates of AT&T Inc. (collectively, "AT&T"), hereby submits the following reply comments in response to the Federal Communications Commission's ("Commission" or "FCC") Second Further Notice of Proposed

Rulemaking (“*Spectrum Frontiers Second FNPRM*”) in the above-captioned proceeding.<sup>1</sup>

AT&T appreciates the Commission’s continued efforts to free additional spectrum for flexible use and believes that many of the proposals advanced by the Commission in the *Spectrum Frontiers Second FNPRM* will ensure that the United States continues to be a leader in advanced wireless technologies and services.

As the record demonstrates, there is broad support for many of the proposals in the *Spectrum Frontiers Second FNPRM*, including the limited operability requirements for the 24 GHz band and flexible performance and buildout requirements for Upper Microwave Flexible Use Service (“UMFUS”) licensees. The record also shows that the Commission can take additional steps to encourage the rapid deployment of innovative services in these bands. In particular, AT&T reiterates its call for the Commission to expeditiously auction millimeter wave (“mmW”) spectrum, while at the same time ensuring that the rules adopted for such auctions provide licensees with the certainty and flexibility necessary to make these bands a flourishing ecosystem capable of supporting innovative 5G, Internet of Things (“IoT”), and other advanced services.

## **II. THE COMMISSION MUST QUICKLY AUCTION MILLIMETER WAVE SPECTRUM BANDS**

AT&T encourages the Commission to expeditiously adopt auction rules for auctioning the 24 GHz, 28 GHz, 37.6-40 GHz, and 47 GHz mmW spectrum bands. There is no reason why the Commission cannot develop auction rules on a separate, parallel track alongside efforts on

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<sup>1</sup> *Use of Spectrum Bands Above 24 GHz for Mobile Radio Services, et al.*, GN Docket No. 14-177, et al., Second Report and Order, Second Further Notice of Proposed Rulemaking, Order on Reconsideration, and Memorandum Opinion and Order, FCC 17-152 (Nov. 22, 2017) (*Spectrum Frontiers Second Report and Order* or *Spectrum Frontiers Second FNPRM*).

Capitol Hill to resolve the auction deposits issue.<sup>2</sup> In that way, the Commission would position itself to initiate the auction immediately upon enactment of statutory relief.

Moreover, although AT&T urges the Commission to do everything it can to enable a prompt, single auction involving all the mmW spectrum bands referenced above, the criticality of maintaining U.S. leadership in 5G technology dictates that if developing service rules for the 24 GHz and 47 GHz bands would delay the mmW auction, the Commission should go ahead and auction the mmW spectrum bands already allocated for UMFUS and for which service rules have already been adopted. In other words, if necessary to avoid lag time, the Commission should prioritize the auction of the 28 GHz and 37.6-40 GHz allocated in the initial *Spectrum Frontiers Report and Order*.<sup>3</sup> While the Commission could also identify additional bands to be auctioned concurrently, this process should not postpone the auction of the initial spectrum bands that have been laying in inventory for several years.

To assist the Commission in achieving Chairman Pai's essential target of conducting a high-band spectrum auction in 2018,<sup>4</sup> AT&T recently submitted a detailed auction design

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<sup>2</sup> *Spectrum Frontiers Second FNPRM*, ¶ 6.

<sup>3</sup> The Commission has referred to the 37 GHz (37.0-38.6) and 39 GHz (38.6-40.0 GHz) bands separately throughout this proceeding. However, it is logically more consistent to divide the bands between the 600 megahertz at 37.0-37.6 GHz, which has been allocated for shared use, and the 2400 megahertz at 37.6-40.0 GHz, which is subject to consistent UMFUS rules, despite the 37.0-38.6 GHz and 38.6-40.0 GHz bands having been allocated at different times. The 37.6-40.0 GHz band should be treated as a single band for purposes of moving to auction, as all of this 2400 megahertz is allocated in 200 MHz blocks, is subject to the same rules, and is interoperable.

<sup>4</sup> *See Spectrum Frontiers Second Report and Order* (Statement of Chairman Ajit Pai).

proposal for the mmW spectrum bands.<sup>5</sup> Though focused primarily on the 37.6-40 GHz band, the proposed approach could be used for other mmW band auctions and consists of a two-phase procedure involving the initial allocation of blocks via a clock auction format and a second-price, sealed-bid assignment phase.<sup>6</sup> By adopting this familiar auction framework, the Commission can decrease the administrative burden associated with establishing an auction and provide certainty for potential auction participants.<sup>7</sup>

### **III. ADOPTING CONSISTENT SPECTRUM HOLDINGS RULES ACROSS ALL MILLIMETER WAVE BANDS WILL INCREASE BIDDER FLEXIBILITY AND CERTAINTY**

#### **A. The Commission Has Recognized that Pre-Auction Limits Restrict Auction Participation**

AT&T encourages the Commission to employ consistent policies for spectrum aggregation across the mmW bands, including adopting its proposal to eliminate the pre-auction limit of 1250 megahertz for the 28 GHz, 37.0-37.6 GHz, and 37.6-40.0 GHz bands (a limit that was unwisely promulgated in the *Spectrum Frontiers Report and Order*<sup>8</sup>). As the Commission observed, it would be inconsistent to retain pre-auction limits for these bands, but not to impose

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<sup>5</sup> See Letter from Alex Starr, Assistant Vice President- Senior Legal Counsel, AT&T Services, Inc., to Marlene Dortch, Secretary, Federal Communications Commission, GN Docket No. 14-177, et al. (Dec. 12, 2017).

<sup>6</sup> *Id.*

<sup>7</sup> See Comments of T-Mobile, GN Docket No. 14-177 et al., at n.50 (Jan. 23, 2018) (“T-Mobile Comments”) (“T-Mobile appreciates the merit of the AT&T proposal and believes that both it, or the repacking approach the Commission announced in the Second Report and Order can likely produce the desired outcome of making the 39 GHz band more suitable for wider-bandwidth channels.”).

<sup>8</sup> *Use of Spectrum Bands Above 24 GHz for Mobile Radio Services, et al.*, GN Docket No. 14-177, et al., Report and Order and Further Notice of Proposed Rulemaking, 31 FCC Rcd 8014, 8081, ¶¶ 183-84 (2017) (*Spectrum Frontiers Report and Order*).

pre-auction limits in the 24 GHz and 47 GHz bands.<sup>9</sup> Eliminating artificial spectrum holding limits allows for greater flexibility for auction participants, further facilitating innovation and efficient use of mmW spectrum. For example, if a licensee holds spectrum in one mmW band, a pre-auction limit on all mmW bands may prevent that licensee from acquiring needed spectrum in another mmW band. Not only would this decrease the utility of the bands, but it also would foster competitive imbalances where a licensee's holdings are exclusive to one particular band. The Commission has recognized that “bright-line, pre-auction limits may restrict unnecessarily the ability of entities to participate in and acquire spectrum in an auction” and should reject any attempt to impose such limits on mmW spectrum bands.<sup>10</sup>

AT&T disagrees with commenters that not only support retention of the previously adopted spectrum holdings limits, but also urge the Commission to reconsider its decision and extend those same limits to the 24 and 47 GHz bands. Some commenters contend that pre-auction limits would prevent “anti-competitive spectrum aggregation” and enable smaller carriers to more successfully participate in the upcoming mmW band auctions.<sup>11</sup> This argument is flawed, however, as any pre-auction limit the Commission adopts ultimately may prohibit providers from acquiring the necessary spectrum to support their operations, creating the same anti-competitive environment these commenters aim to prevent by adopting such limits. As Verizon observes, the Commission has targeted 4950 megahertz of mmW spectrum to be

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<sup>9</sup> *Spectrum Frontiers Second FNPRM*, ¶ 105.

<sup>10</sup> *Spectrum Frontiers Second Report and Order*, ¶ 73.

<sup>11</sup> Comments of Competitive Carriers Association, GN Docket No. 14-177 et al., at 5-6 (Jan. 23, 2018) (“CCA Comments”). *See also* T-Mobile Comments at 15-16; Comments of United States Cellular, GN Docket No. 14-77 et al., at 6-9 (Jan. 23, 2018) (“U.S. Cellular Comments”).

“licensed in multiple blocks of different sizes and geographic areas, providing significant spectrum resources for auction bidders of all shapes and sizes.”<sup>12</sup> In light of the large amount of mmW spectrum to be made available by the Commission, all interested providers will have ample opportunity to obtain such spectrum at auction. Moreover, pending proceedings at the Commission, as well as Federal legislation, promise to unlock additional spectrum for flexible uses, including mobile deployments.<sup>13</sup>

Imposing spectrum caps on mmW bands also would impair the ability of companies to compete with providers that intend to utilize other spectrum bands for 5G deployments. As AT&T and others have repeatedly said, 5G is not synonymous with mmW spectrum—5G networks will span the full range of licensed spectrum options and 5G standards are being developed for spectrum as low as 600 MHz. Indeed, T-Mobile has indicated that it will utilize holdings in the 600 MHz band to facilitate deployment of its 5G network.<sup>14</sup> Similarly, Sprint and Verizon are focusing their efforts to bring 5G to market using holdings in the 2.5 GHz and 3.5 GHz bands, respectively, and DISH has indicated it will deploy 5G services in AWS-4

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<sup>12</sup> Comments of Verizon, GN Docket No. 14-177 et al., at 5 (Jan. 23, 2018) (“Verizon Comments”).

<sup>13</sup> See e.g., *Expanding Flexible Use in Mid-Band Spectrum Between 3.7 and 24 GHz*, GN Docket No. 17-183, Notice of Inquiry, 32 FCC Rcd 6373 (2017); *Advancing Innovation and Reinvigorating Widespread Access to Viable Electromagnetic Spectrum Act*, S.1682, 115th Cong. (2017).

<sup>14</sup> See e.g., Letter from John Hunter, Senior Director, Technology and Engineering Policy, T-Mobile USA, Inc., to Marlene H. Dortch, Secretary, FCC, WT Docket No. 15-244 (Jan. 18, 2018) (“Since the conclusion of the incentive auction, T-Mobile has been rapidly expanding and strengthening its LTE network and laying the groundwork for a nationwide 5G network using its 600 MHz spectrum.”).

spectrum.<sup>15</sup> Thus, any pre-auction limit on the ability to obtain mmW spectrum would only serve to inhibit competition for carriers that have focused on mmW as part of their 5G plans.

**B. Post-Auction Case-by-Case Review of Spectrum Holdings Would Create Uncertainty and Complexity That Will Reduce Competition.**

The Commission similarly should refrain from conducting case-by-case reviews of mmW spectrum holdings in the context of post-auction applications for initial mmW licenses. Such an approach would create uncertainty and complexity, resulting in dampened auction competition. Indeed, as Verizon observes, post-auction, case-by-case review runs counter to the Commission’s statutory requirement for clear, upfront bidding rules.<sup>16</sup>

Requiring applicants to bid without the certainty of actually receiving the licenses on which they bid also would put a damper on bidding and reduce competition in the auction. Moreover, to the extent that post-auction review prevents winning bidders from receiving licenses, it could result in delaying the availability of spectrum until long after the auction has concluded. In previously rejecting post-auction, case-by-case competitive reviews of the licensing applications of winning bidders, the Commission noted that “mak[ing] a finding post-auction that the acquisition of spectrum by a winning bidder would be likely to cause

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<sup>15</sup> See e.g., Letter from Gardner H. Foster, Senior Counsel, Legal and Government Affairs, Sprint Corporation, to Marlene H. Dortch, Secretary, FCC, WT Docket No. 03-66 (Dec. 1, 2017) (“At this meeting, Sprint outlined its current and future use of the 2.5 GHz bands and the critical role this proceeding will play in its ability to deliver 4G LTE and 5G broadband services in this band.”); Comments of Verizon, GN Docket No. 12-354, at 8 (July 24, 2017) (“However, since adopting the *3.5 GHz Order* in 2015, the Commission has included the 3.5 GHz band as part of a larger, multi-band 5G approach that incorporates the 600 MHz band and millimeter-wave bands, and Verizon and other wireless providers have followed suit.”); Consolidated Interim Construction Showing, ULS File Nos. 0007690716 et seq. (Mar. 7, 2017) (“DISH plans to efficiently deploy a next-generation 5G-capable network, focused on supporting the Internet of Things (“IoT”), and anticipates meeting the applicable final FCC construction milestones for the Spectrum Licenses by March 2020.”).

<sup>16</sup> Verizon Comments at 7.

competitive harm . . . could compel abandonment of the license application or divestiture of the license won at auction, which could create incentives for bidder behavior that would undermine the goals of the auction.”<sup>17</sup> These same considerations apply to the mmW band auctions.

Commenters advocating for a post-auction, case-by-case review argue that such an approach would promote competition.<sup>18</sup> While these commenters purport to be in favor of increased competition, as demonstrated above, the mere threat of being deprived of licenses a bidder has won will reduce competition in the auction. Moreover, to the extent that post-auction reviews result in stripping licenses from winning bidders, competition would be harmed by artificially limiting the number of licenses the auction brings to market, hamstringing the efforts of those ready willing and able to deploy 5G services. Though reducing both auction and market competition in this way would no doubt benefit those who support post-auction review, such an approach risks leaving both money and spectrum on the table and reducing both auction and market competition, rather than putting the spectrum to work in the hands of those who value it most highly. While the mmW bands will not be the only bands in which 5G is deployed, they will play a key role in helping to propel these dynamic new services. Accordingly, the Commission should be careful to not impose arbitrary restraints on these bands at the behest of those who plan to focus their 5G efforts in other bands, and instead must adopt an approach that fosters investment, ultimately benefitting consumers.

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<sup>17</sup> See *Policies Regarding Mobile Spectrum Holdings; Expanding Economic and Innovation Opportunities of Spectrum Through Incentive Auctions*, Report and Order, 29 FCC Rcd 6133, ¶ 140 (2014).

<sup>18</sup> See CCA Comments at 6; T-Mobile Comments at 16; U.S. Cellular Comments at 9.



#### IV. CONCLUSION

AT&T applauds the Commission for its extensive work in freeing up mmW spectrum for additional, dynamic uses. However, the Commission should continue pushing forward by standing up auctions for mmW spectrum bands, especially those for which it already has established rules. Moreover, the Commission must consider additional ways to provide certainty and flexibility to bidders through the auction process. By doing so, the Commission can ensure the success of future mmW auctions and make the innovative new services expected to be deployed in these bands a reality.

Respectfully Submitted,

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