

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

In the Matter of	)	
	)	
Service Rules for Advanced Wireless Services	)	WT Docket No. 04-356
in the 1915-1920 MHz, 1995-2000 MHz, 2020-	)	
2025 MHz and 2175-2180 MHz Bands	)	
	)	
Service Rules for Advanced Wireless Services	)	WT Docket No. 02-353
in the 1.7 GHz and 2.1 GHz Bands	)	

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**REPLY COMMENTS OF T-MOBILE USA, INC.**

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T-Mobile USA, Inc. (“T-Mobile”) respectfully submits these reply comments in response to the Commission’s Notice of Proposed Rulemaking in the above-captioned proceeding.<sup>1</sup> T-Mobile once again applauds the Commission for the steps it has taken towards providing additional spectrum for Advanced Wireless Services (“AWS”). Indeed, the record in this proceeding demonstrates that wireless providers are fully committed to providing new, innovative, and efficient services to consumers using this additional spectrum. To facilitate these new services, however, the Commission must adopt a licensing and service rule framework that is practical and appropriate to encourage the rapid deployment of services to the public.

**I. INTRODUCTION AND SUMMARY**

As demonstrated by the record in this proceeding, wireless carriers seek additional spectrum to remain competitive, deploy new services, and improve service quality for consumers. Wireless mobile voice and data use has surged in the last decade and additional

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<sup>1</sup> *Service Rules for Advanced Wireless Services in the 1915-1920 MHz, 1995-2000 MHz, 2020-2025 MHz and 2175-2180 MHz Bands*, Notice of Proposed Rulemaking, 19 FCC Rcd 19263 (2004) (“NPRM”). All Comments in this proceeding are short-cited herein.

spectrum will strengthen the competitive posture of the market, as well as promote new services. The allocation of the 1915-1920/1995-2000 MHz (“H block”) and 2020-2025/2175-2180 MHz (“J block”) bands for AWS provides the potential for more spectrum to be assigned to companies such as T-Mobile for this purpose. However, appropriate service rules are necessary to ensure the licensing and technical considerations for this band actually facilitate the deployment of this band in a manner that makes economic sense and does not unduly limit licensee flexibility.

Accordingly, the Commission must establish service and technical rules for the H block that will adequately protect Mobile Satellite Service (“MSS”) incumbents in the 2000-2020 MHz band without adversely affecting H block licensees. While T-Mobile acknowledges that some additional protection from H block base station transmissions to MSS/ATC base station receivers in the 2000-2020 MHz band may be necessary, it strongly disagrees with the assertions of the MSS industry that all such protections must be unilaterally borne by H block licensees.

Similarly, in adopting service rules for this spectrum, the record first supports the adoption of BTA service areas for the H block. To ensure incumbent wireless carriers are not required to comply with two duplicative regulatory regimes (*i.e.*, one for PCS and another for H block), the Commission should adopt the Part 24 rather than the Part 27 technical rules for the H block. The H and J block spectrum should be licensed using open competitive bidding, thereby ensuring that this spectrum is obtained for its most highly valued use. Finally, T-Mobile strongly believes that a “keep-what-you-use” performance requirement is not necessary to ensure the timely deployment of services over this spectrum.

T-Mobile believes, with appropriate technical limitations and service rules, the H and J blocks can be put to valuable use and encourages the Commission to expeditiously move forward

to complete the rule making process so that this spectrum can be licensed and utilized in the marketplace.

## II. INTERFERENCE ISSUES

### A. The Terrestar request for 1 MHz of guard band within the H block to protect MSS in the 2000-2020 MHz and other protections is without merit.

In its initial comments, T-Mobile generally supported the idea that Mobile Satellite Service (“MSS”) operations adjacent to the H and J block spectrum may require some added protection from H block base station operations in the 1995-2000 MHz band.<sup>2</sup> However, T-Mobile also noted that the potential for overload interference from MSS mobile operations in the 2000-2020 MHz band to base station receivers in the H block needed to be studied and remedied.<sup>3</sup> In the MSS industry, only Terrestar responded to the *NPRM*.<sup>4</sup> Terrestar asserts that (1) the Commission should establish a minimum of 1 MHz of guard band between the MSS and H block; (2) H block licensees should be required to install filters on MSS base stations; and (3) H block licensees should be required to coordinate with MSS licensees prior to commencing operations.<sup>5</sup> T-Mobile believes that Terrestar’s assertions and demands are without merit and should be rejected by the Commission.

The 2 GHz MSS licensees are licensed in 40 MHz of spectrum, 2000-2020 MHz paired with 2180-2200 MHz. The final frequency selections for the MSS licensees remains unclear. Especially given the difficulties facing the MSS industry, the Commission cannot be certain that the remaining five licensees will meet their milestones for construction, further rendering

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<sup>2</sup> See T-Mobile Comments at 11-12.

<sup>3</sup> *Id.*

<sup>4</sup> See Terrestar Networks Comments at 5-9.

<sup>5</sup> *Id.*

protection of these future operations impractical. Although MSS entities were licensed prior to the H block, as these licensees have yet to construct or even provide significant technical information concerning their ancillary terrestrial component (“ATC”) systems, it would appear that H block licensees should not be the only party responsible for rectifying interference. In light of this, future H block licensees should not necessarily be forced to provide a guard band to MSS, especially since it is uncertain that all five MSS licensees will ultimately occupy the 2000-2020 MHz band.

T-Mobile urges the Commission to require MSS licensees to cooperate in good faith with future H block licensees rather than placing all interference resolution requirements on H block entities. Indeed, as Nextel notes in its comments, a variety of mechanisms (including adoption of tighter OOB limits, use of antenna polarization isolation, and use of coordination measures) could be used by both parties to ensure coexistence of MSS and H block operations.<sup>6</sup>

Most importantly, prior to the reallocation of the 1990-2000 MHz spectrum from MSS to terrestrial use, MSS licensees were directly adjacent to PCS base station operations. At that time, MSS licensees did not require PCS base stations to provide a 1 MHz guard band between these adjacent operations. H block operations would be directly comparable to such PCS base station operations and should present the exact same potential for interference as the PCS facilities. Indeed, the C block PCS base stations (1975-1990 MHz) were permitted to operate at 1640 watts (or 62 dBm) with an OOB limit of  $-13$  dBm/MHz (or  $43 + 10 \log P$ ). H block base stations should be permitted to utilize the exact same technical parameters, otherwise the band’s utility for mobile use is greatly diminished.

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<sup>6</sup> See Nextel Comments at 43.

### **III. LICENSING AND SERVICE RULE ISSUES**

#### **A. The record clearly demonstrates that BTA service areas should be adopted for the H block.**

As indicated by the record in this proceeding, wireless carriers' spectrum needs vary by location.<sup>7</sup> Over time, consumers have demonstrated a clear demand for national wireless services in order to enjoy the benefits of ubiquitous coverage and competitive price offerings that flow from economies of scale and scope. Currently, the vast majority of American wireless customers obtain service from one of the five national service providers or from one of the larger regional service providers in part because they want access to extensive footprints without having to pay roaming fees.<sup>8</sup> Accordingly, to remain competitive, some carriers need spectrum to fill-in their existing footprint to achieve a national footprint, while others need spectrum on a regional or more limited basis. Thus, it is most important to provide flexibility here to enable those who need spectrum to acquire it in proportion to their needs.

Almost all commenters, including both large and small wireless providers, support this conclusion. For example, CTIA – The Wireless Association urges the Commission to adopt

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<sup>7</sup> See, e.g., NTCH Comments at 3 (noting that the establishment of BTA service areas will allow licensees to “precisely tailor” their acquisitions to their needs); Rural Cellular Association Comments at 1-2 (indicating that many of its members, which are small and rural licensees, need additional spectrum in their relevant markets); Nextel Comments at 50-51 (urging the adoption of BTA service areas because they will allow both small businesses to provide services in a single area and large providers to expand and supplement their existing spectrum holdings); MCI Comments at 2-4 (promoting the establishment of a nationwide license that would be available only to new entrants and thereby indicating that certain new entrants need spectrum on a national scale).

<sup>8</sup> See *Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993, Annual Report and Analysis of Competitive Market Conditions with Respect to Commercial Mobile Services*, Ninth Report, FCC 04-216, ¶ 5, Appendix A Table 4 (2004) (indicating that at the end of December 2003 there were 160.6 million wireless subscribers and that of those 160.6 million subscribers approximately 142.2 million were served by Verizon Wireless, Cingular Wireless, AT&T Wireless, Sprint PCS, T-Mobile, Nextel, ALLTEL, US Cellular, Dobson Communications, Leap Wireless and Western Wireless).

license areas that are consistent with the PCS block service areas for the H block because they will ensure that this spectrum is easily incorporated into licensees' existing spectrum plans.<sup>9</sup> Similarly, Nextel, NTCH, and the Rural Cellular Association support the adoption of BTA service areas for the H block.<sup>10</sup> The use of Basic Trading Areas ("BTAs") for the H block is a compromise position that ensures that both types of licensees are able to obtain the spectrum they need.<sup>11</sup> For those who only need limited amounts of spectrum in select areas, BTAs provide a geographic area that is optimized to meet their customer coverage needs. Similarly, BTAs are large enough so that they can easily be combined at auction to form larger geographic areas. Finally, BTA service areas can easily be combined with incumbent licensees' current spectrum plans, which are based on Major Trading Areas ("MTAs") and BTAs.<sup>12</sup>

In contrast to the general consensus voiced by commenters, UTStarcom has asserted that the H block should be licensed on a single county basis.<sup>13</sup> T-Mobile urges the Commission to reject this proposal. Single county licensing results in over 3,000<sup>14</sup> licenses being auctioned, as

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<sup>9</sup> CTIA Comments at 4-6.

<sup>10</sup> Nextel Comments at 49-53; NTCH Comments at 3-4; Rural Cellular Association Comments at 2-4.

<sup>11</sup> Moreover, Auction 58 has provided additional, tangible evidence of the viability of BTA service areas, with more than \$2 billion in gross revenue already bid for BTA-sized licenses. *See* <http://auctionbidding.fcc.gov/bidding/home.htm>

<sup>12</sup> The PCS A and B blocks were licensed on a Major Trading Area ("MTA") basis while the PCS C through F blocks were licensed on a BTA basis. MTAs are made up of BTA service areas. The Commission refused to consider BTAs in the *NPRM* citing concerns about Rand McNally copyright issues. However, CTIA noted its willingness to aid the Commission in resolving licensing issues with Rand McNally, a result T-Mobile strongly encourages. *See* CTIA Comments at 5.

<sup>13</sup> UTStarcom Comments at 2-4.

<sup>14</sup> At the time of the 2000 census, there were 3,141 counties in the United States and 78 county equivalents. *See* United States Summary: 2000 Population and Housing Unit Counts, Table 23 (Apr. 2004).

opposed to the 493 licenses that would be auctioned if BTA service areas are adopted, and thus will prove administratively difficult to manage. This high number of available licenses could result in many markets going “unsold,” as seen in many other FCC auctions where large numbers of licenses are offered.<sup>15</sup> Moreover, the required coordination process, although difficult at a BTA basis, would be virtually unworkable at a county level. Given that the mobile services market has evolved along MTA and BTA service area boundaries, rather than along county lines, and carriers accordingly need to fill in their service areas along similar lines, the Commission should reject UTStarcom’s proposal to license the H block at the county level and instead adopt a BTA licensing regime for this spectrum.

**B. Part 24 technical rules must be adopted for the H block.**

Like many commenters, T-Mobile supports adoption of either the Part 24 or Part 27 regulatory framework for the H block, presuming Part 24 technical rules apply. Part 24 of the Commission’s rules currently governs the A-G PCS blocks.<sup>16</sup> As previously indicated by the Commission, incumbents are most likely to acquire H block spectrum.<sup>17</sup> These incumbents will therefore most likely incorporate this spectrum into their already existing networks, which are currently operating under Part 24. As commenters have almost uniformly noted, the imposition of Part 27 technical rules on these incumbents would unduly increase the regulatory burdens

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<sup>15</sup> See, e.g., *Upper and Lower Paging Band Auction Closes*, Public Notice, DA 01-2858 (Dec. 11, 2001) (indicating that only 5,323 of the 15,514 licenses available were won at auction).

<sup>16</sup> See 47 C.F.R. § 24.229.

<sup>17</sup> *Amendment of Part 2 of the Commission’s Rules to Allocate Spectrum Below 3 GHz for Mobile and Fixed Services to Support the Introduction of New Advanced Wireless Services, including Third Generation Wireless Systems*, Second Report and Order, 17 FCC Rcd 23193, ¶ 12 (2002).

such that these providers would be required to comply with duplicative regulatory regimes.<sup>18</sup> Indeed, handsets that are designed to operate over a carrier's entire network would need to be certified under both Parts 24 and 27 and would, as a result, be subject to different standards that are designed to address the same policy objectives. These additional requirements would impose significant costs on both incumbent providers and manufacturers. Thus, contrary to the Commission's presumption, the imposition of Part 27 technical rules on the H block would stand as an impediment to the provision of Broadband PCS in this band.<sup>19</sup> Indeed, for this reason, the Commission adopted a consistent position in its recent 800 MHz proceeding when it applied Part 24 of its rules to the G block.<sup>20</sup> T-Mobile therefore urges the Commission to apply Part 24 rules to the H block.

**C. The H and J blocks should be licensed via open competitive bidding.**

The Commission has regularly found that competitive bidding is the most efficient mechanism for licensing mutually exclusive applications for spectrum use.<sup>21</sup> Indeed, competitive bidding ensures that the available spectrum is obtained by the entity that desires it

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<sup>18</sup> See e.g., Motorola Comments at 11-12; Nextel Comments at 4-5.

<sup>19</sup> *NPRM* at ¶ 16.

<sup>20</sup> See *Improving Public Safety Communications in the 800 MHz Band*, Report and Order, 19 FCC Rcd 14969, Appendix C ¶ 11 (2004) (amending Part 24 of the Commission's Rules to include the paired frequency blocks 1910-1915 MHz and 1990-1995 MHz).

<sup>21</sup> See, e.g., *FCC Report to Congress on Spectrum Auctions*, Report, 13 FCC Rcd 9601, 9612 (1997) ("the Commission's experience [with] auctions shows that competitive bidding is a more efficient mechanism to assign spectrum in cases of mutual exclusivity than any previously employed methods"); *2004 Biennial Regulatory Review*, Wireless Telecommunications Bureau Staff Report, DA 05-20, 30 (2005) ("The subpart Q competitive bidding rules establish procedures for the efficient licensing of spectrum. Use of auction procedures allows for substantially faster licensing and lower costs than alternative licensing methods such as comparative hearings, and is more likely to result in award of licenses to those entities that value the spectrum the most and will use it most efficiently").

most and is thus utilized for the most highly valued use. Accordingly, the use of competitive bidding assures the Commission that the winning bidder will deploy services using this spectrum in the most efficient and timely manner. Absent serious competitive concerns, the imposition of artificial restrictions on who can obtain spectrum at auction are not warranted. In a thriving, competitive wireless marketplace, the Commission should ensure that its auction design facilitates the rapid assignment of spectrum to those who value it most and are more likely to build out and provide service. Open, competitive auctions have by far achieved the most favorable results for the FCC and have done so without unnecessary transaction costs.

In recent years, the Commission has acknowledged the inefficiencies associated with closed bidding and has moved towards an open auction regime under which designated entities receive alternative concessions.<sup>22</sup> This regime has been extremely effective in promoting designated entity participation in auctions. Indeed, designated entities have acquired over three quarters of all available licenses in open auctions where bidding credits were available.<sup>23</sup> Accordingly, the Commission should not earmark this spectrum for a particular type of entity, as proposed by MCI and NTCH,<sup>24</sup> but instead should license both the H and J blocks through open competitive bidding and provide a bidding credit to those entities that qualify as designated entities.

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<sup>22</sup> See, e.g., *Amendment of the Commission's Rules Regarding Installment Payment Financing for Personal Communications Services (PCS) Licensees*, Sixth Report and Order and Order on Reconsideration, 15 FCC Rcd 16266, ¶ 2 (2000) (eliminating closed bidding for certain C and F block licenses).

<sup>23</sup> Reply Comments of T-Mobile USA, Inc., RM-11019, 4-7 (filed Aug. 9, 2004).

<sup>24</sup> NTCH Comments at 4-7 (proposing closed bidding for half of the available spectrum); MCI Comments at 2-3 (proposing that this spectrum be made available only to new market entrants that do not currently offer first-mile broadband services).

**D. The Commission should reject a “keep-what-you-use” performance requirement.**

The Commission should reject the Rural Telecommunications Group’s proposal to establish a “keep-what-you-use” regulatory regime and instead rely on the market to efficiently and economically deploy new services in these bands. As indicated by the variety of commenters filing in this proceeding, this spectrum is widely desired by a variety of entities so that they may provide additional services and better service quality.<sup>25</sup> These providers thus already have strong economic incentives to expand their service, as demand requires. With the intense competition that exists in the wireless sector, failure to do so would jeopardize a service provider’s chances of maintaining, let alone increasing, its customer base. Licensing on a BTA-basis allows these carriers to obtain only the amount of spectrum they need, thereby eliminating the need for a “keep-what-you-use” performance requirement.

This robust wireless competition exists in both rural and urban areas. In 2003, the Commission found that 95% of the total United States population had access to three or more wireless providers.<sup>26</sup> The Commission also reported that 97% of the total U.S. population live in counties in which digital wireless service is offered.<sup>27</sup> More recently, the Commission found that rural counties now have an average of 3.7 mobile competitors.<sup>28</sup> Furthermore, the Commission has found that, “[w]hile it appears that, on average, a smaller number of operators are serving

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<sup>25</sup> See generally Nextel Comments; Sprint/Verizon Wireless Joint Comments; T-Mobile Comments; US Cellular Association Comments; MCI Comments; Rural Cellular Association Comments.

<sup>26</sup> See *Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993*, Eighth Report, 18 FCC Rcd 14783, ¶ 18 (2003).

<sup>27</sup> *Id.*

<sup>28</sup> See *Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993*, Ninth Report, FCC 04-216, ¶ 109 (Sept. 28, 2004) (“*Ninth Competition Report*”).

rural areas than urban areas, this difference does not necessarily indicate that effective CMRS competition does not exist in rural areas.”<sup>29</sup> The Commission has recognized that rural areas with low population densities generally support fewer competitors than non-rural areas because of the higher costs and lower revenue potential inherent in low-density areas.<sup>30</sup> As the Commission noted in its Ninth Competition Report, the Rural Cellular Association, representing many of the smallest wireless carriers, recently reported that there is “robust and effective competition, increasing year-to-year, in the markets served by RCA members.”<sup>31</sup> This increased competition renders a “keep-what-you-use” requirement unnecessary in rural areas as well.

#### **IV. CONCLUSION**

In conclusion, the record clearly demonstrates that in an environment where the need for spectrum is great, the Commission must not hamstring future H block licensees with extensive, unilateral protections of MSS licensees. Moreover, the Commission should adopt service and licensing rules that will facilitate the swift deployment of services over this spectrum without inhibiting licensees’ flexibility to provide innovative and efficient new services. None of these requirements should slow the Commission’s process to license the H and J block spectrum in an expeditious fashion. T-Mobile urges the Commission to move swiftly to make additional AWS spectrum available for use in the marketplace.

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<sup>29</sup> *Id.* at ¶ 111.

<sup>30</sup> *See, e.g., 2000 Biennial Regulatory Review Spectrum Aggregation Limits for Commercial Mobile Radio Services*, Report and Order, 16 FCC Rcd 22668, ¶ 43 (2001) (noting that “the underlying economics appear to make it unlikely that competition in RSAs will evolve in the near term to rival that of MSAs”).

<sup>31</sup> *Ninth Competition Report* at ¶ 110.

Respectfully submitted,

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