



# PUBLIC NOTICE

**Federal Communications Commission**  
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## **SPECTRUM TASK FORCE INVITES TECHNICAL INPUT ON APPROACHES TO MAXIMIZE BROADBAND USE OF FIXED/MOBILE SPECTRUM ALLOCATIONS IN THE 2 GHZ RANGE**

**ET Docket No. 10-142, WT Docket Nos. 04-356, 07-195**

**Comment Date: June 17, 2011**

**Reply Comment Date: July 1, 2011**

The Spectrum Task Force invites technical input on approaches to encourage the growth of terrestrial mobile broadband services in the 2 GHz spectrum range that is allocated for fixed and mobile use. We seek information on developing a cohesive approach that maximizes the terrestrial mobile broadband potential of this spectrum. Specifically, we encourage focus on bands co-allocated for Mobile Satellite Service (MSS) at 2000-2020 MHz and 2180-2200 MHz (“2 GHz MSS band” or “S Band”), as well as bands, or portions of bands, designated for Advanced Wireless Service (AWS), including: AWS-2 upper “H” block spectrum at 1995-2000 MHz; AWS-2 paired “J” block spectrum at 2020-2025 MHz and 2175-2180 MHz; and AWS-3 spectrum at 2155-2175 MHz.<sup>1</sup> This Public Notice will inform the Commission’s ongoing assessment of spectrum suitable for mobile broadband use by gathering information about one possible approach to facilitating terrestrial operations in the 2 GHz range.<sup>2</sup>

The *National Broadband Plan* recommended both that the Commission “resolve the future of the spectrum already allocated for AWS,” and that the Commission add a primary Mobile allocation to the 2 GHz MSS band “to provide the option of flexibility to licensees to provide stand-alone terrestrial services using the spectrum.”<sup>3</sup> In July 2010, in the *MSS NPRM* the Commission proposed to add co-primary Fixed and Mobile allocations to one specific MSS spectrum band—the 2 GHz MSS band at

<sup>1</sup> See generally Fixed and Mobile Services in the Mobile Satellite Service Bands at 1525-1559 MHz and 1625.5-1660.5 MHz, 1610-1625.5 MHz and 2483.5-2500 MHz, and 2000-2020 MHz and 2180-2200 MHz, *Report and Order*, ET Docket No. 10-142, 26 FCC Red 5710, 5714-16, at ¶¶ 8-13 (rel. April 6, 2011) (“2 GHz Band Co-Allocation Order”); Service Rules for Advanced Wireless Services in the 1915-1920 MHz, 1995-2000 MHz, 2020-2025 MHz and 2175-2180 MHz Bands, WT Docket No. 04-356 (“AWS-2 Proceeding”); Service Rules for Advanced Wireless Services in the 2155-2175 MHz Band, WT Docket No. 07-195 (“AWS-3 Proceeding”).

<sup>2</sup> In issuing this Public Notice focused on terrestrial use of 2 GHz range spectrum, we recognize the Commission’s intent to ensure that the U.S. market, as a whole, continues to have robust MSS capabilities to serve critical public safety, homeland security, and rural needs. See, e.g., Fixed and Mobile Services in the Mobile Satellite Services Bands at 1525-1559 MHz and 1626.5-1660.5 MHz, 1610-1626.5 MHz and 2483.5-2500 MHz, and 2000-2020 MHz and 2180-2200 MHz, *Notice of Proposed Rulemaking and Notice of Inquiry*, ET Docket No. 10-142, 25 FCC Red 9481, 9494, at ¶¶ 33-34 (2010) (respectively, “MSS NPRM” and “MSS NOI”); *2 GHz Band Co-Allocation Order*, 26 FCC Red at 5710-11, ¶¶ 1, 4.

<sup>3</sup> Connecting America: The National Broadband Plan, at pp. 86-88 (2010) (“National Broadband Plan”).

2000-2020 MHz and 2180-2200 MHz—and in the *MSS NOI* it sought comment on potential synergies among these bands.<sup>4</sup> In April 2011, the Commission adopted the *2 GHz Band Co-Allocation Order* in which it added co-primary Fixed and Mobile allocations to the 2 GHz MSS band, thereby “lay[ing] the groundwork for more flexible use of the band, including for terrestrial broadband services.”<sup>5</sup> In so doing, the Commission also stated its intention to issue a follow-up notice of proposed rulemaking on subjects raised in the *MSS NOI*, and its expectation that “staff will take advantage of industry technical expertise as it develops options, which may include potential synergies with neighboring bands, to inform [the Commission’s] decision making process.”<sup>6</sup> Additionally, several commenters to the *MSS NOI* proposed integrating, to varying degrees, AWS and 2 GHz MSS spectrum as the Commission encourages deployment of terrestrial mobile broadband services in this spectrum.<sup>7</sup> Moreover, the Commission has previously recognized the benefit that integrating terrestrial use of 2 GHz MSS and AWS spectrum could have for these terrestrial services, in particular, by allowing for sufficient economies of scale to support equipment design.<sup>8</sup>

We seek information on band plans that could increase opportunities for successful use of 2 GHz spectrum for terrestrial mobile broadband. The Appendix to this Public Notice illustrates three potential 2 GHz terrestrial spectrum concepts to stimulate discussion. We encourage filers to comment on these concepts and to suggest other possibilities as well. We request that filers explain how band plan concepts may relate to other potential options involving 2 GHz spectrum or other nearby bands. For example, the Commission has designated the 1995-2000 MHz “H” block spectrum for pairing with spectrum at 1915-1920 MHz.<sup>9</sup> Additionally, although the Commission has not proposed to pair AWS-3 spectrum with another unassigned band, the FCC Spectrum Task Force earlier sought comment on two bands identified by NTIA as potential pairing candidates.<sup>10</sup> To what extent are possible terrestrial 2 GHz band plans

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<sup>4</sup> See *MSS NPRM* and *MSS NOI*, 25 FCC Rcd at 9486-87, 9493, at ¶¶ 9-13, 30.

<sup>5</sup> *2 GHz Band Co-Allocation Order*, 26 FCC Rcd at 5710, ¶ 2.

<sup>6</sup> *Id.* at 5715-16, ¶ 13. We note that in the *MSS NOI* the Commission sought comment on increasing terrestrial use of all of the MSS bands and that the *National Broadband Plan* contained recommendations for each of the MSS bands. *MSS NOI*, 25 FCC Rcd at 9492, ¶ 26; *National Broadband Plan*, at p. 88. For the 2 GHz MSS band, specifically, the Commission asked about developing “flexibility for deploying new mobile broadband services under the proposed co-primary Fixed and Mobile allocations.” *MSS NOI*, 25 FCC Rcd at 9492, ¶ 26.

<sup>7</sup> See, e.g., AT&T *MSS NOI* Comments, ET Docket No. 10-142, at 2-3 (filed Sept. 15, 2010); CTIA *MSS NOI* Comments, ET Docket No. 10-142, at 14 (filed Sept. 15, 2010); New DBSD *MSS NOI* Comments, ET Docket No. 10-142, at 16 (filed Sept. 15, 2010). We also acknowledge that the Commission’s earlier AWS NPRMs elicited other approaches to increasing terrestrial access to spectrum. See generally *AWS-2 Proceeding* and *AWS-3 Proceeding*.

<sup>8</sup> See 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, ET Docket Nos. 00-258, 95-18, RM-9498, RM-10024, *Sixth Report and Order, Third Memorandum Opinion and Order, and Fifth Memorandum Opinion and Order*, 19 FCC Rcd 20720, 20742, at ¶ 46 (2004) (“*2004 Allocation Order*”); see also Service Rules for Advanced Wireless Services in the 2155-2175 MHz Band, WT Docket No. 07-195, *Notice of Proposed Rulemaking*, 22 FCC Rcd 17035, 17050, at ¶ 29 (2007).

<sup>9</sup> *2004 Allocation Order*, 19 FCC Rcd at 20725, ¶ 7.

<sup>10</sup> See Spectrum Task Force Requests Information on Frequency Bands Identified by NTIA as Potential Broadband Spectrum, ET Docket No. 10-123, *Public Notice*, 26 FCC Rcd 3486 (OET, WTB rel. March 8, 2011). The Commission sought comment on the following frequency bands: 1695-1710 MHz, 1755-1850 MHz, 3550-3650 MHz, 4200-4220 MHz, and 4380-4400 MHz. See also An Assessment of the Near-Term Viability of

consistent with these or other allocation options? Which approach will maximize the overall value of various affected bands for terrestrial mobile broadband?

We also encourage discussion of other technical matters related to possible terrestrial 2 GHz band plans. For example, for any particular band plan should certain spectrum be paired? Should spectrum be designated for uplink use (mobile radio to base station transmission) and downlink use (base station to mobile radio transmission)? For any particular band plan, what uplink/downlink scheme would maximize economies of scale, particularly for handsets? What are the interference challenges and how might they be mitigated? How should benefits from international harmonization be taken into consideration?<sup>11</sup> To what extent would various terrestrial mobile band concepts co-exist with existing satellite services? What other public interest considerations might be applicable?

We also invite perspectives on implementing a cohesive 2 GHz band plan for terrestrial mobile broadband use that accounts for the identified bands including a combination of licensed and unassigned spectrum. Although the AWS bands are not yet licensed, the 2 GHz MSS bands are licensed for MSS under Part 25 of the Commission's rules.<sup>12</sup> We seek information on ways to assign licenses for stand-alone terrestrial services in an integrated 2 GHz band pursuant to the Commission's Part 27 rules. Our emphasis in these questions is on voluntary approaches, under which MSS incumbents would agree to modification of their licenses, consistent with the public interest.<sup>13</sup> These approaches may include:

- *Voluntary Incentive Auctions.* Consistent with the National Broadband Plan, in the *MSS NOI*, the Commission sought comment on whether, if Congress grants the Commission authority to conduct incentive auctions, such auctions would “be an appropriate mechanism for providing an option for incumbent 2 GHz MSS licensees to vacate the band in favor of mobile broadband providers operating on new licenses.”<sup>14</sup> In light of the Commission's adding Fixed and Mobile allocations to the 2 GHz MSS band and of industry developments that have

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Accommodating Wireless Broadband Systems in the 1675-1710 MHz, 1755-1780 MHz, 3500-3650 MHz, and 4200-4220 MHz, 4380-4400 MHz Bands, U.S. Dept. of Commerce, Oct. 2010, available at [http://www.ntia.doc.gov/reports/2010/FastTrackEvaluation\\_11152010.pdf](http://www.ntia.doc.gov/reports/2010/FastTrackEvaluation_11152010.pdf). Members of the wireless industry have suggested that the 1755-1780 MHz band be paired with the AWS-3 spectrum instead of the 1695-1710 MHz band. *E.g.*, Comments of CTIA – The Wireless Association, ET Docket No. 10-123, at 6-10 (filed April 23, 2011). The 1755-1780 MHz band is currently allocated solely for Federal use. *See* 47 C.F.R. § 2.106.

<sup>11</sup> *See 2 GHz Band Co-Allocation Order*, 26 FCC Rcd at 5714, ¶ 8 (noting that, with the addition of the Fixed and Mobile allocations, the 2 GHz MSS band is now harmonized internationally).

<sup>12</sup> Two MSS licensees, who between them hold licenses to the entire U.S. 2 GHz MSS band, have each filed petitions under chapter 11 of the Bankruptcy Code, 11 U.S.C. §§101 *et seq.* (DBSD North America, Inc., et al., No. 09-13061, Bankr. S.D.N.Y., and TerreStar Networks, Inc., et al., No. 10-15446, Bankr. S.D.N.Y.). New DBSD Satellite Services GP and TerreStar License, Inc. are required to obtain the Commission's consent to any transfer of control or license assignment that may occur in connection with their emergence from bankruptcy. 47 U.S.C. §§ 214, 310(d).

<sup>13</sup> *See National Broadband Plan*, at p. 88 (recommending that any grant of terrestrial rights in the 2 GHz band have “conditions designed to ensure timely utilization of the spectrum for broadband and appropriate consideration for the step-up in the value of the affected spectrum”).

<sup>14</sup> *MSS NOI*, 25 FCC Rcd at 9493, ¶ 28 (citing *National Broadband Plan*, Recommendation 5.4, at p. 81). Under an incentive auction, “existing licensees could, on a voluntary basis, relinquish bandwidth in exchange for a portion of the proceeds from an auction for the new licenses authorizing terrestrial only services.” *Id.*

occurred since the adoption of the *MSS NOI*, we seek additional perspectives on this possible approach for voluntary conversion of the 2 GHz MSS band from Part 25 to Part 27 service.<sup>15</sup>

- *Voluntary Return of MSS Spectrum Rights.* We also seek further information on whether existing licensees should be afforded the option of returning some portion of their spectrum license to the Commission for subsequent auction as part of a terrestrial 2 GHz band, in exchange for receiving Part 27 terrestrial rights in the remaining 2 GHz MSS spectrum.<sup>16</sup>

### **Procedural Matters**

This proceeding shall be treated as a “permit-but-disclose” proceeding in accordance with the Commission's *ex parte* rules.<sup>17</sup> Parties making oral *ex parte* presentations in this proceeding are reminded that memoranda summarizing the presentation must contain the presentation’s substance and not merely list the subjects discussed.<sup>18</sup> More than a one- or two-sentence description of the views and arguments presented is generally required.<sup>19</sup> Other rules pertaining to oral and written *ex parte* presentations in permit-but-disclose proceedings are set forth in section 1.1206(b) of the Commission’s rules.<sup>20</sup>

Pursuant to sections 1.415 and 1.419 of the Commission’s rules,<sup>21</sup> interested parties may file comments and reply comments on or before the dates indicated on the first page of this document. Comments may be filed using: (1) the Commission’s Electronic Comment Filing System (ECFS), (2) the Federal Government’s eRulemaking Portal, or (3) by filing paper copies.<sup>22</sup> All filings should reference the docket numbers of this proceeding, **ET Docket No. 10-142** and **WT Docket Nos. 04-356, 07-195**, and filings in response to this Public Notice will become part of the record in the previously pending proceedings as well.

- **Electronic Filers:** Comments may be filed electronically using the Internet by accessing the ECFS: <http://fjallfoss.fcc.gov/ecfs2/> or the Federal eRulemaking Portal: <http://www.regulations.gov>. Generally, only one copy of an electronic submission must be filed. If multiple docket or rulemaking numbers appear in the caption of this proceeding, however, commenters must transmit one electronic copy of the comments to each docket or rulemaking number referenced in the caption. In completing the transmittal screen, commenters should include their full name, U.S. Postal Service mailing address, and the applicable docket or rulemaking number.

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<sup>15</sup> See *MSS NOI*, 25 FCC Rcd at 9493, ¶ 28.

<sup>16</sup> See *id.* at 9493, ¶ 29.

<sup>17</sup> See 47 C.F.R. §§ 1.1200(a), 1.1206.

<sup>18</sup> See Commission Emphasizes the Public’s Responsibilities in Permit-But-Disclose Proceedings, *Public Notice*, 15 FCC Rcd 19945 (2000).

<sup>19</sup> See 47 C.F.R. § 1.1206(b)(2). Other rules pertaining to oral and written presentations are also set forth in Section 1.1206(b). See 47 C.F.R. § 1.1206(b).

<sup>20</sup> 47 C.F.R. § 1.1206(b).

<sup>21</sup> 47 CFR §§ 1.415, 1.419.

<sup>22</sup> See *Electronic Filing of Documents in Rulemaking Proceedings*, 63 FR 24121 (1998).

- Paper Filers: Parties who choose to file by paper must file an original and four copies of each filing. If more than one docket or rulemaking number appears in the caption of this proceeding, filers must submit two additional copies for each additional docket or rulemaking number.

Filings can be sent by hand or messenger delivery, by commercial overnight courier, or by first-class or overnight U.S. Postal Service mail. All filings must be addressed to the Commission's Secretary, Office of the Secretary, Federal Communications Commission.

- All hand-delivered or messenger-delivered paper filings for the Commission's Secretary must be delivered to FCC Headquarters at 445 12<sup>th</sup> St., SW, Room TW-A325, Washington, DC 20554. The filing hours are 8:00 a.m. to 7:00 p.m. All hand deliveries must be held together with rubber bands or fasteners. Any envelopes must be disposed of before entering the building.
- Commercial overnight mail (other than U.S. Postal Service Express Mail and Priority Mail) must be sent to 9300 East Hampton Drive, Capitol Heights, MD 20743.
- U.S. Postal Service first-class, Express, and Priority mail must be addressed to 445 12<sup>th</sup> Street, SW, Washington DC 20554.

Parties shall send one copy of their comments and reply comments to the Commission's duplicating contractor, Best Copy and Printing, Inc., Portals II, Room CY-B402, 445 12th Street, SW, Washington, D.C. 20554, telephone (202) 488-5300, via facsimile at (202) 488-5563, or via e-mail at [fcc@bcpiweb.com](mailto:fcc@bcpiweb.com).

Comments and reply comments and any subsequently-filed documents in this matter will be available for public inspection and copying during business hours in the Reference Information Center, Federal Communications Commission, CY-A257, 445 12<sup>th</sup> Street, SW, Washington, DC 20554. These documents will also be available via ECFS by entering ET Docket No. 10-142 or WT Docket Nos. 04-356 or 07-195. They may also be purchased from Best Copy and Printing, Inc., telephone (202) 488-5300, facsimile (202) 488-5563, e-mail [fcc@bcpiweb.com](mailto:fcc@bcpiweb.com).

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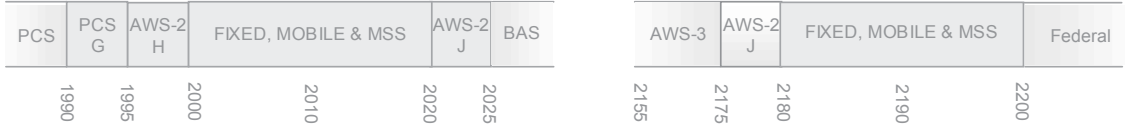
Action by the Chiefs, Wireless Telecommunications Bureau, International Bureau, and Office of Engineering and Technology.

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APPENDIX

**Potential Terrestrial Spectrum Concepts (2 GHz)**

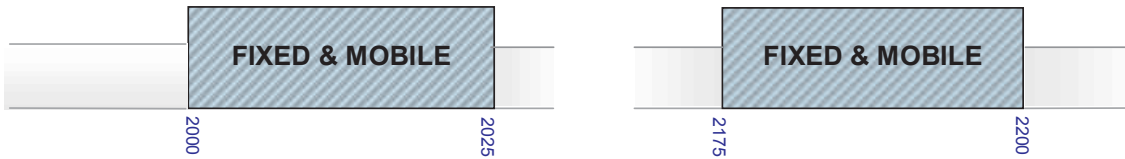
Existing 2 GHz Range



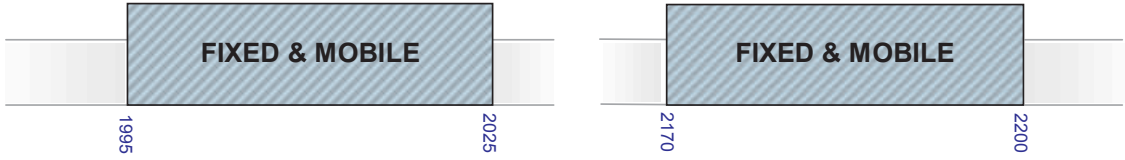
Concept: 40 megahertz  
(2000-2020 MHz and 2180-2200 MHz)



Concept: 50 megahertz  
(2000-2025 MHz and 2175-2200 MHz)



Concept: 60 megahertz  
(1995-2025 MHz and 2170-2200 MHz)



Not to scale