

**Before the  
Federal Communications Commission  
Washington, D.C. 20554**

In the Matter of	)	
	)	
Amendment of Parts 2, 25, and 87 of the	)	
Commission's Rules to Implement Decisions from	)	
World Radiocommunication Conferences	)	ET Docket No. 02-305
Concerning Frequency Bands Between 28 MHz	)	
and 36 GHz and to Otherwise Update the Rules in	)	
this Frequency Range	)	
	)	
Amendment of Parts 2 and 25 of the	)	
Commission's Rules to Allocate Spectrum For	)	RM-10331
Government and Non-Government Use in the	)	
Radionavigation-Satellite Service	)	

**ORDER ON RECONSIDERATION**

**Adopted:** May 3, 2006

**Released:** May 8, 2006

By the Commission:

**I. INTRODUCTION**

1. In this Order on Reconsideration, we deny a Petition for Partial Reconsideration (Petition) filed by AirTV Limited (AirTV) in response to the Commission’s *S-Band Allocation Order*, which, *inter alia*, deleted the unused Broadcasting Satellite Service (BSS) allocation from the band 2500-2690 MHz and removed a related footnote from the Table of Frequency Allocations (Table).<sup>1</sup> We continue to believe that the decision in the *S-Band Allocation Order* is necessary to prevent terrestrial licensees in the band 2500-2690 MHz from incurring the costs of mitigating the interference expected from BSS systems, such as the one proposed by AirTV.

**II. BACKGROUND**

2. In the *S-Band Allocation Order*, the Commission deleted the unused BSS allocation from the band 2500-2690 MHz, concluding that such operations would create added interference mitigation costs for terrestrial services in the band.<sup>2</sup> Added as an adjunct to Instructional Television Fixed Service

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<sup>1</sup> See Amendment of Parts 2, 25, and 87 of the Commission’s Rules to Implement Decisions from World Radiocommunication Conferences Concerning Frequency Bands Between 28 MHz and 36 GHz and to Otherwise Update the Rules in this Frequency Range, ET Docket No. 02-305, *Notice of Proposed Rulemaking*, 17 FCC Rcd 19756, 19772-74 (2002); *Report and Order*, 18 FCC Rcd 23426, 23445 (2003) (*S-Band Allocation Order*).

<sup>2</sup> See *S-Band Allocation Order*, 18 FCC Rcd at 23445, ¶¶ 41-47. The band 2500-2690 MHz is currently used for fixed services by the Educational Broadband Service (EBS) and Broadband Radio Service (BRS). In 2004, the Commission fundamentally restructured the rules for this band to greatly enhance the ability of licensees and new entrants to provide ubiquitous wireless broadband services to all Americans. See Amendment of Parts 1, 21, 73, 74 and 101 of the Commission’s Rules to Facilitate the Provision of Fixed and Mobile Broadband Access, Educational and Other Advanced Services in the 2150-2162 and 2500-2690 MHz Bands, WT Docket No. 03-66, *Report and Order and Further Notice of Proposed Rulemaking*, 19 FCC Rcd 14165, 14169 (2004). Before the

(continued...)

(ITFS) use of this band, the BSS allocation was limited by footnote NG101 to “community reception” of educational television programming and public service information. The Commission’s deletion of the BSS allocation from the band 2500-2690 MHz was based on the finding that BSS operations in the band 2500-2690 MHz would increase costs for terrestrial services due to the need to mitigate interference caused by BSS operations. In conjunction with the deletion of this unused allocation, the Commission also deleted from the Table footnote NG101.<sup>3</sup>

3. AirTV had opposed the Commission’s proposal to delete the BSS allocation in the 2520-2670 MHz portion of the 2500-2690 MHz band in its comments on the *Notice of Proposed Rulemaking* in this proceeding and instead had urged the Commission to expand the scope of the BSS allocation by eliminating footnote NG101 from the Table.<sup>4</sup> The Commission nonetheless deleted the BSS allocation at 2500-2690 MHz and footnote NG101, agreeing with commenters such as The Boeing Company and the Wireless Communications Association International, Inc., (WCA) that supported the deletion. AirTV had earlier filed proposals in Canada and Brunei Darussalam to provide a satellite-based Direct-to-Aircraft (DTA) system using the 2535-2655 MHz portion of the band 2520-2670 MHz in order to deliver a video/broadband service to airline passengers.<sup>5</sup> The Commission was unconvinced that AirTV’s DTA system would not cause interference to U.S. terrestrial services in the 2520-2670 MHz portion of the band, and found that such a system would increase costs for terrestrial services due to the need for interference mitigation.<sup>6</sup> The Commission also rejected AirTV’s claim that the World Trade Organization’s (WTO’s) General Agreement on Trade in Services (GATS) constrained the Commission’s ability to limit satellite authorizations in cases where incumbent operators could face potential interference.<sup>7</sup>

4. On January 22, 2004, AirTV filed its Petition seeking reinstatement of the BSS allocation in the band 2520-2670 MHz and expansion of the BSS allocation in that band through deletion of footnote

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2004 *Order*, EBS and BRS were known as the Instructional Television Fixed Service (ITFS) and the Multipoint Distribution Service (MDS), respectively. The Commission added an allocation for mobile, except aeronautical mobile, service to the band 2500-2690 MHz in 2001. *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 No. 00-258, *First Report and Order and Memorandum Opinion and Order*, 16 FCC Rcd 17222 (2001). The *S-Band Allocation Order* also removed the unused Fixed Satellite Service (FSS) allocation from the band. That portion of the decision was not subject to reconsideration filings.

<sup>3</sup> *S-Band Allocation Order*, 18 FCC Rcd at 23445, ¶ 47.

<sup>4</sup> *See Notice of Proposed Rulemaking (Notice)* in ET Docket No. 02-305, 17 FCC Rcd at 19773, ¶ 52. We note that, while the Commission had proposed to delete the BSS and FSS allocations in the entire 2500-2690 MHz band, AirTV had opposed deletion of the BSS allocation only in the 2520-2670 MHz portion of the band. *See* AirTV Comments at 7-8 and 11, and AirTV Reply Comments at 2.

<sup>5</sup> *See* AirTV Petition at 1-2 and AirTV Comments at 4. In 1997, AirTV filed a request with Industry Canada for seven geostationary-satellite orbit (GSO) locations using BSS S-band frequencies at 86° West Longitude, 96° West Longitude, 55° West Longitude, 12° West Longitude, 13.5° West Longitude, 170° East Longitude, and 180° East Longitude. In addition, AirTV filed a request with the Administration of Brunei Darussalam for two GSO locations using BSS S-band frequencies at 64° East Longitude and 96° East Longitude. *See* AirTV Comments at 4, n.5.

<sup>6</sup> *See S-Band Allocation Order*, 18 FCC Rcd at 23445, ¶ 47.

<sup>7</sup> *Id.*

NG101.<sup>8</sup> On February 9, 2004, we released a public notice seeking comment on AirTV's Petition.<sup>9</sup> WCA filed an opposition (Opposition) to AirTV's Petition on March 3, 2004. In addition, both AirTV and WCA submitted additional pleadings in the record.<sup>10</sup>

### III. PLEADINGS

5. In its Petition, AirTV contends that, in deleting the BSS allocation, the Commission based its decision on the incorrect conclusion that BSS systems such as AirTV's proposed system would increase costs for terrestrial services due to the need to mitigate interference from BSS systems, and thus that the Commission's decision does not serve the public interest.<sup>11</sup> AirTV also claims that it did not have to demonstrate that BSS systems would not cause interference to terrestrial systems. Instead, it asserts that any modification or deletion of the BSS allocation should occur only after an affirmative showing that BSS co-existence with co-frequency/co-primary terrestrial services is not feasible, and further asserts that U.S. terrestrial system licensees at 2520-2670 MHz should have been required to demonstrate that BSS and terrestrial systems could not operate simultaneously in the band before the Commission deleted the allocation.<sup>12</sup> In the alternative, AirTV also asserts that it demonstrated in its Comments and Reply Comments in response to the *Notice* that AirTV's system would not cause interference to terrestrial systems, and that the material it submitted with its Petition demonstrates AirTV's system would not cause interference to terrestrial systems.<sup>13</sup> In the study included with its Petition, AirTV assumed that the elevation angles from terrestrial receiving antennas to the AirTV satellite at 86° West Longitude only range from 20 to 50 degrees, that the maximum gain of base station and customer premises equipment receiving antennas is 16 dB and 2 dB, respectively, and that an interference-to-noise (I/N) ratio -6dB or less would result in no harmful interference to a third generation (3G) terrestrial system.<sup>14</sup> AirTV also reprises its argument that deletion of the BSS

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<sup>8</sup> AirTV states that it limited its request for reinstatement of the BSS allocation to the band 2520-2670 MHz in order to conform to the international allocation in Article 5 of the International Telecommunications Union (ITU) Radio Regulations. See AirTV Petition at 2, n.4.

<sup>9</sup> See Petitions for Reconsideration and Clarification of Action in Rulemaking Proceedings, *Public Notice* (Report No. 2645), 69 Fed. Reg. 7484 (Feb. 17, 2004).

<sup>10</sup> Although AirTV captioned its March 17, 2004, document a "Reply," we note that it was not submitted within 10 days after the time for filing oppositions had expired. See 47 C.F.R. § 1.429(g). The deadline for WCA's Opposition to AirTV's Petition was March 3, 2004, so this made March 15, 2004, the deadline for AirTV's Reply Comments to WCA's Opposition. AirTV's pleading was received on March 17, 2004, two days after the reply filing deadline. Because WCA's Certificate of Service states its Opposition was served on AirTV by hand-delivery, the additional time contemplated by Section 1.4(h) of our Rules for mail-delivery is not applicable. Accordingly, Reply Comments were due March 15, 2004. Moreover, AirTV did not file a request for acceptance of a late-filed Reply as required by Section 1.46(b) of the Commission's Rules, 47 C.F.R. § 1.46(b). Thus, we will refer to this pleading, as well as the April 23, 2004, and May 18, 2004, filings by WCA, as *Ex Parte* Comments.

<sup>11</sup> See AirTV Petition at 3-5, 7.

<sup>12</sup> *Id.* at 5-6.

<sup>13</sup> *Id.* at 4-6.

<sup>14</sup> See AirTV Petition, Attachment 1, Feasibility of Co-Frequency Sharing Between BSS Systems and Terrestrial Systems in the Band 2535-2655 MHz, at 7-8.

allocation would contravene the United States' obligations under the WTO's GATS.<sup>15</sup> AirTV contends that, as an alternative to deletion of the BSS allocation, the Commission should consider whether individual BSS applications would be expected to cause interference to terrestrial systems and address the appropriate remedy on a case-by-case basis.<sup>16</sup>

6. In its Opposition, WCA argues that the Commission's decision was both procedurally proper and appropriate.<sup>17</sup> It contends that AirTV's attempt to retain the BSS allocation while removing footnote NG101 would increase the nature and scope of services permitted in the band 2500-2690 MHz beyond what was contemplated in this rulemaking without proper notice.<sup>18</sup> WCA further asserts that if AirTV had chosen to use "the proper procedural vehicle" to expand the BSS allocation to cover the service it intends to provide – such as a petition for waiver pursuant to Section 2.106 of the Commission's Rules<sup>19</sup> – then it would have been incumbent on AirTV to show that its system would be compatible with existing terrestrial uses in the band.<sup>20</sup> WCA also challenges, on both procedural and substantive grounds, the study that AirTV submitted with its Petition. WCA asserts that the Commission should disregard that filing as untimely and should dismiss AirTV's Petition, pursuant to Section 1.429(b) of the Commission's Rules, as containing no facts that were new or previously unknown to AirTV.<sup>21</sup> WCA also disputes the technical assumptions relied upon by AirTV. WCA asserts that the I/N ratio needed to protect terrestrial systems from harmful interference is less than -10 dB, rather than less than -6 dB (which AirTV contends is sufficient) and asserts that AirTV's proposed DTA system would cause harmful interference to U.S. terrestrial systems.<sup>22</sup> According to WCA, the study AirTV submitted with its Petition fails to demonstrate that AirTV's proposed system would not cause harmful interference to terrestrial systems, because the study is based on parameters for IMT-2000 base stations and customer premises equipment antennas rather than considering the characteristics of the receiving antennas deployed in existing BRS and EBS terrestrial systems.<sup>23</sup> Furthermore, WCA asserts that the United States' non-discrimination obligations under the WTO's GATS do not apply to the BSS. It also claims that the deletion of the satellite service allocation does not discriminate against foreign satellite system applicants because the decision applies to all potential entrants, both foreign and domestic.<sup>24</sup>

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<sup>15</sup> See AirTV Petition at 7-9. The GATS represents a set of multilateral rules and commitments covering government measures that relate to trade in services.

<sup>16</sup> *Id.* at 6-7.

<sup>17</sup> WCA Opposition at 7.

<sup>18</sup> 47 U.S.C. § 303. See WCA Opposition at 5-6.

<sup>19</sup> 47 C.F.R. § 2.106.

<sup>20</sup> See WCA Opposition at 9. Similarly, WCA argues that the Commission properly acted within its authority under Section 303 of the Communications Act of 1934, as amended, 47 U.S.C. § 303, when it removed the BSS allocation from the band. WCA Opposition at 7.

<sup>21</sup> *Id.* at 10-11 (citing Section 1.429(b) of the Commission's Rules, 47 C.F.R. § 1.429(b)).

<sup>22</sup> See WCA Opposition at 12-13.

<sup>23</sup> See WCA Opposition at 11. IMT-2000 (International Mobile Telecommunications for the year 2000) is the term the International Telecommunication Union (ITU) uses to describe its global standard for next-generation wireless networks. See H. Newton, *Newton's Telecom Dictionary, 21<sup>st</sup> Edition*, CMP Books, March 2005, p. 423.

<sup>24</sup> See WCA Opposition at 15-16.

7. In response to WCA's Opposition, AirTV reiterates its position that the BSS allocation should be reinstated without footnote NG101.<sup>25</sup> It also claims that its filings were procedurally proper, disagrees with WCA's technical discussion, maintains its position that the Commission erred in its decision and that WCA did not refute these arguments, and counters claims of Administrative Procedure Act (APA) violations that would arise were we to adopt the AirTV position.<sup>26</sup> AirTV further contends for the first time that Section 7 of the Communications Act of 1934, as amended,<sup>27</sup> required parties that supported the Commission's deletion of the BSS allocation at 2500-2690 MHz to demonstrate that the BSS was inconsistent with the public interest.<sup>28</sup> Specifically, AirTV argues that Section 7 states that parties opposing a new technology or service must demonstrate that such proposal is inconsistent with the public interest, and that because AirTV's proposed system would provide new global DTA broadband services to the public, Section 7 imposes a burden of proof on parties supporting deletion of the BSS allocation.<sup>29</sup> In its *Ex Parte* comments, filed April 23, 2004, and May 18, 2004, WCA restates its assertion that AirTV's system would cause interference to terrestrial systems in the United States.<sup>30</sup>

#### IV. DISCUSSION

8. Pursuant to Section 1.429(a) of the Commission's rules, 47 C.F.R. § 1.429(a), any interested party may petition for reconsideration of a final action in a Commission proceeding. Section 1.429(b) states that a petition for reconsideration which relies on facts which have not previously been presented to the Commission will be granted only if (1) the facts relied on relate to events which have changed since the last opportunity to present them to the Commission; (2) the facts relied on were unknown to the petitioner until after his last opportunity to present them to the Commission, and he could not through the exercise of ordinary diligence have learned of the facts in question prior to such an opportunity; or (3) the Commission determines that consideration of the facts relied on is required in the public interest.<sup>31</sup>

9. We first reject AirTV's apparent position that it bore no responsibility for demonstrating in the record that BSS systems, such as its proposed DTA system, would not cause interference to terrestrial systems. We distinguish between a burden of proof, which AirTV mistakenly believes that we imposed upon it in the *S-Band Allocation Order*, and the burden of persuasion that is an integral part of any rulemaking proceeding. In the *Notice*, the Commission sought comment on the proposed deletion of an unused BSS allocation, and the record that was subsequently developed included pleadings setting forth reasons why we should adopt or reject the proposal.<sup>32</sup> Because the Commission must make a rational connection between the facts found and the choice made, and provide a reasoned analysis to support its determination – and because in this case the comments contained conflicting

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<sup>25</sup> See AirTV March 17, 2004, *Ex Parte* Comments at 7-8.

<sup>26</sup> *Id.* at 2-10.

<sup>27</sup> 47 U.S.C. § 157(a).

<sup>28</sup> See AirTV March 17, 2004, *Ex Parte* Comments at 7.

<sup>29</sup> *Id.*

<sup>30</sup> See WCA *Ex Parte* Comments (filed April 23, 2004) at 1-2. See also WCA *Ex Parte* Comments (filed May 18, 2004) at 1.

<sup>31</sup> See 47 C.F.R. § 1.429(b).

<sup>32</sup> See *S-Band Allocation Notice*, 17 FCC Rcd at 19772-74, ¶¶ 50-52.

stances – any interested party had a responsibility to weigh in with substantive and persuasive arguments in order to support its position.<sup>33</sup> Thus, it was incumbent upon AirTV to offer substantive and persuasive comments that could counter both our tentative conclusion and other parties' pleadings that supported the proposed deletion of the allocation. In addition, however, we also now agree with WCA that AirTV's suggestion in its comments that the Commission should retain the BSS allocation, but without footnote NG101, was an inappropriate filing and amounts to the equivalent of a waiver request or a petition for further rulemaking. As such, it was incumbent on AirTV to show that its proposed DTA system would not interfere with terrestrial systems.

10. In the *S-Band Allocation Order*, the Commission made the determination that deleting the BSS/FSS allocation would serve the public interest by preventing the potential disruption of EBS and BRS across the country, as well as by avoiding imposing high costs on terrestrial licensees to mitigate harmful interference from BSS and FSS services to terrestrial services.<sup>34</sup> A review of the record on reconsideration gives us no reason to alter our conclusion. We do not find persuasive AirTV's argument that we should overturn our decision on the grounds that its proposed system would not produce "unacceptable interference" to terrestrial systems because it would operate with power flux density (PFD) levels 10 dB below the PFD levels specified in International Telecommunication Union (ITU) Table 21-4.<sup>35</sup> As the final product of a consultative process that involved input from a variety of working groups, ITU Table 21-4 sets forth maximum PFD levels at the Earth's surface produced by emissions from a satellite that are intended to promote sharing between BSS and terrestrial services in the band 2500-2690 MHz.<sup>36</sup> We note, however, that other parties that have studied the potential for BSS interference to terrestrial systems in the band have discussed the possible interference mitigation measures that may be necessary with shared operations in the band. For example, in a liaison statement from ITU-R Study Groups Working Party (WP) 6S to WP 8F that AirTV did not cite, WP 6S indicates that all BSS systems, even if operated at PFD levels 10 dB below the levels specified in ITU Table 21-4 as AirTV proposed, will reduce the coverage area of terrestrial systems in the band 2630-2655 MHz.<sup>37</sup> Similarly, the United Kingdom, within the framework of the European Conference of Postal and Telecommunications Administrations Electronic Communications Committee Project Team 1 (CEPT ECC/PT1), found that BSS systems, even if operated at the lower PFD levels proposed by AirTV, will result in reduced coverage area for terrestrial systems using the band 2630-2655 MHz.<sup>38</sup> Even one of the Draft Recommendations cited by AirTV in support of its Petition expressly assumes that terrestrial

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<sup>33</sup> See, e.g., *Motor Vehicle Mfg. Assn. v. State Farm Mut. Auto Ins.*, 463 U.S. 29 (1983).

<sup>34</sup> Under Section 303 of the Communications Act of 1934, as amended, 47 U.S.C. § 303, the Commission has the authority to assign bands of frequencies to the various classes of radio stations and to make such regulations as it may deem necessary to prevent interference between stations. Based on the Commission's determination that operation of BSS systems at 2500-2690 MHz would impose substantial interference mitigation costs on terrestrial systems, deletion of the BSS allocation was consistent with the broad authority the Commission has under Section 303. See 47 U.S.C. §§ 303(c), 303(f). See also *S-Band Allocation Order*, 18 FCC Red at 23445 ("[W]e find that such a system would increase costs for terrestrial services due to the need to mitigate interference caused by AirTV's system.").

<sup>35</sup> See AirTV Petition at 4. See also AirTV Comments at 7 and AirTV Reply Comments at 2-4.

<sup>36</sup> See ITU Radio Regulations, Article 21, Section V, at 256.

<sup>37</sup> See *Liaison Statement to WP 8F From WP 6S A Methodology To Assess Interference From BSS (Sound) Into Terrestrial IMT-2000 Systems Intending To Use The Band 2630-2655 MHz*, Document 8F/909-E, March 27, 2003, at 14-16.

<sup>38</sup> See *Determination of Threshold Values for BSS (Sound) Satellites in the 2630-2655 MHz Band*, Delayed Contribution Document 8F/771-E, September 18, 2002, at 36.

stations will be employing mitigation techniques to counteract BSS systems' interference.<sup>39</sup> All these studies predict the additional interference mitigation costs for terrestrial systems subjected to BSS interference would include, for example, the need to install additional base stations in order to restore any lost coverage area.<sup>40</sup> Furthermore, because the studies by WP 6S and the United Kingdom only consider BSS systems' interference potential to IMT-2000 terrestrial systems, the potential impact to existing BRS and EBS systems in the United States is actually greater than the impact predicted in those studies. This is due to the fact that existing BRS and EBS systems use receiving antennas with higher gain than the receiving antennas typically employed in IMT-2000 systems.<sup>41</sup>

11. A closer examination of AirTV's proposed system gives us additional reason to conclude that it would impose interference mitigation burdens on incumbent terrestrial service operators. When we compare the I/N ratios AirTV purports its system would produce with the ratios reported in the WP 6S and United Kingdom studies, we find that AirTV's I/N ratios closely approximate the I/N ratios that the WP 6S and the United Kingdom materials indicate will result in reduced coverage area and increased interference mitigation costs for terrestrial systems.<sup>42</sup> Furthermore, the interference study that accompanied AirTV's Petition does not evaluate the interference potential of its proposed satellites at 55° West Longitude and 96° West Longitude, and does not compute the I/N ratios for elevation angles below 20° for its proposed satellite at 86° West Longitude, where the interference potential from

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<sup>39</sup> See AirTV Reply Comments at 3, n.4. See also ITU-R Working Party 8F, WG Spectrum, Preliminary Draft New Recommendation, *Methodology to assess interference between IMT-2000 and BSS (Sound) systems in the 2630-2655 MHz band*, Document 8F/TEMP/293-E, June 4, 2002. The example calculations of BSS systems' interference potential included in this Draft Recommendation are not conclusive regarding the interference potential of AirTV's proposed DTA system because they only examine the BSS interference potential at latitudes from 15° N to 60° N, and significant portions of Alaska, where, as noted *infra*, the interference potential of AirTV's system is more prevalent, lie north of 60° N latitude. The other Draft Recommendation cited by AirTV merely proposes BSS PFD levels in the band 2535-2655 MHz that closely mirror the PFD levels specified in ITU Table 21-4. In addition, this Draft Recommendation sets forth the interference mitigation measures, including deploying improved side-lobe discrimination receiving antennas, employing orbital avoidance by planned stations, and using frequency offset, that terrestrial stations would need to employ to mitigate potential BSS interference. See ITU-R Study Group 9, Draft New Recommendation ITU-R F.[FS-BSS 2.6 GHz], *Power-flux density threshold levels between systems in the broadcasting-satellite service (sound) in geostationary and non-geostationary satellite orbits for space-to-Earth transmissions and the fixed service in the band 2535-2655 MHz*, Document 9/118(Rev.1)-E, May 15, 2002.

<sup>40</sup> Although AirTV claims that additional studies from ITU working groups, Industry Canada, and AirTV have addressed the compatibility of BSS systems with 3G terrestrial wireless services in the band 2520-2670 MHz, and thus demonstrate its proposed DTA system would not produce unacceptable interference to U.S. terrestrial systems, including those using second generation technology, AirTV did not include any studies with its pleadings that show its proposed system would not interfere with existing first generation terrestrial systems in the band. In addition, AirTV did not identify any ITU studies that demonstrate its proposed system would not interfere with existing terrestrial systems. See AirTV Petition at 3-4. We further note that the Industry Canada study referenced by AirTV is an internal study that is not publicly available.

<sup>41</sup> According to WCA, most BRS and EBS licensees have no plans to deploy any IMT-2000 equipment. See WCA Opposition at 11, and Declaration of Harry W. Perlow, attached to WCA Opposition, at 1. Because the interference study AirTV included with its Petition assumes only IMT-2000 equipment is deployed in existing terrestrial systems, we agree with WCA that the study does not accurately portray the interference potential of AirTV's proposed system to existing terrestrial systems.

<sup>42</sup> See AirTV March 17, 2004, *Ex Parte*, Attachment 1, Technical Statement at 6-7. See also notes 37 and 38, *supra*.

AirTV's proposed system to terrestrial systems is greatest.<sup>43</sup> Satellite signals received at elevation angles below 20° have the greatest potential to cause harmful interference to terrestrial systems because the gain of the receiving antennas in these terrestrial systems increases as the elevation angle decreases below this angle. In this regard, the potential for interference from AirTV's system is most prevalent where AirTV's satellite signals would be received by terrestrial systems' receiving antennas at elevation angles less than 20°, as WCA asserts, in Alaska and Hawaii, but also in portions of the Continental United States, including locations in Arizona, California, Nevada, Oregon, Washington, Idaho, Montana, North and South Dakota, Wyoming, Colorado, and Utah.<sup>44</sup> An evaluation of the interference potential of AirTV's proposed system at elevation angles less than 20° shows that it would produce I/N ratios that exceed -6dB, which all parties have indicated will affect terrestrial operations in the band.<sup>45</sup>

12. For the foregoing reasons, we continue to believe that the Commission properly and rationally concluded that BSS systems will affect the coverage area and introduce potential interference mitigation costs for terrestrial systems. Although AirTV may plan to operate a system that generates PFD levels "significantly below" the maximum levels in Table 21-4 of the ITU Radio Regulations,<sup>46</sup> that in itself does not mean that such operations will not have a significant effect on terrestrial users in the band. While Table 21-4 and the studies we discuss, above, set forth ways in which the band may be shared, it is a different matter to conclude that such shared use best serves the public interest here. In balancing the effect of such burdens on terrestrial licensees against the currently unused BSS allocation, the prospect of interference to terrestrial licensees that would affect their planning and deployment of systems weighs strongly against reinstating the unused BSS allocation. Accordingly, we continue to believe that it best serves the public interest to remove the allocation.

13. Because we have determined that BSS systems will impose interference mitigation costs that we find unacceptable for terrestrial systems, we also reject AirTV's suggestion that the Commission could consider individual BSS applications on a case-by-case basis as impractical. This is especially relevant in light of the Commission's decisions to reband and add a mobile allocation to the band 2500-2690 MHz that are anticipated to promote increased mobile use in these frequencies. Our restructuring of the band, with the enhanced flexibility targeted to facilitate new mobile and wireless broadband applications, is likely to make it more, rather than less, difficult to avoid interference from BSS systems to terrestrial systems. Moreover, based on our evaluation of AirTV's proposed system, as discussed above, we conclude that a BSS system will have minimal likelihood of success in overcoming these interference challenges. Were we to implement AirTV's suggestion to examine specific BSS system proposals on a case-by-case basis and address the appropriate terrestrial mitigation remedy for the interference such BSS systems would be expected to cause to terrestrial systems, we would introduce complexity, uncertainty, and the likelihood of increased costs for terrestrial operators in the band 2500-

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<sup>43</sup> Contrary to AirTV's assertion in its Petition that, over the United States, the elevation angles to AirTV's proposed satellite at 86° West Longitude range from 20° to 50°, we note that the elevation angles to this satellite are less than 20° from locations in portions of Alaska and Hawaii, as are the elevation angles to AirTV's proposed satellite at 96° West Longitude. Similarly, we also find that the elevation angles to AirTV's proposed satellite at 55° West Longitude are less than 20° from locations in Arizona, California, Nevada, Oregon, Washington, Idaho, Montana, North and South Dakota, Wyoming, Colorado, and Utah. See AirTV Petition, Attachment 1, Feasibility of Co-Frequency Sharing Between BSS Systems and Terrestrial Systems in the Band 2535-2655 MHz, at 8; AirTV March 17, 2004, *Ex Parte* Comments, Attachment 1, Technical Statement, at 6-7.

<sup>44</sup> See WCA *Ex Parte* Comments (filed May 18, 2004) at 1. See also note 43, *supra*.

<sup>45</sup> See WCA Opposition at 12-13.

<sup>46</sup> See AirTV Petition at 5.

2690 MHz to build their systems with capabilities for mitigating possible interference from BSS operations. In exchange, we would introduce the prospect that, under certain circumstances that would have not been clearly demonstrated as of yet, it might be possible, at some point in the future, to deploy a BSS operation in the band that would not impose unacceptable interference mitigation costs on existing terrestrial systems.

14. We also find AirTV's other arguments unpersuasive. We reject the argument that, in order to delete the unused BSS allocation, we need an affirmative showing from terrestrial licensees in the band that the BSS cannot coexist with existing terrestrial services.<sup>47</sup> Our election in the *MVDDS* proceeding to require such an analysis does not mandate such an analysis every time we consider adding a new service. In addition, this is a case in which the Commission deleted, rather than added, a service allocation from a frequency band. Furthermore, the respective services contemplated by the parties would both involve ubiquitous mobile receivers. Given the challenges inherent in arranging compatible uses of such receivers, we see no point in requiring or reviewing further technical studies. The sharing scenario proposed is, in this case, not practicable. Consequently, we see no purpose in maintaining an allocation for BSS when we are not in a position to adequately protect BSS earth stations from interference.

15. AirTV also contends for the first time, at this late date, that Section 7 of the Communications Act of 1934, as amended, requires parties that oppose the introduction of a new service in the band (and thus support the Commission's deletion of the BSS allocation in the band 2500-2690 MHz) to demonstrate that the BSS was inconsistent with the public interest.<sup>48</sup> As an initial matter, we note that that portion of the Act has been characterized as a broad policy statement reflecting congressional delegation on policy matters to the Commission's discretion.<sup>49</sup> Furthermore, even if Section 7 should be read to apply to the instant situation involving the deletion of an unused allocation, we nevertheless find that our decision is consistent with the provision's intent. Specifically, because we think that the BRS/EBS band, as recently restructured, holds great potential for the development of new services and technologies, it was consistent with the public interest for us to remove an allocation for a service (in this case, the BSS) that was not presently being offered and that, if deployed, could impose limitations on the rapid and robust deployment of new BRS and EBS technologies. Thus, our decision serves to encourage the provision of new technologies and services to the public, in furtherance of Section 7's broad and general policies.

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<sup>47</sup> AirTV argues that because the Commission had previously required, in a separate proceeding, a sharing feasibility analysis before adding a new service to a spectrum band, the Commission should in the instant situation require a technical showing from the terrestrial services that co-existence is not possible. *See* AirTV Petition at 5-6 (citing Amendment of Parts 2 and 25 of the Commission's Rules to Permit Operation of NGSO FSS Systems Co-Frequency with GSO and Terrestrial Systems in the Ku-Band Frequency Range, ET Docket No. 98-206, *Fourth Memorandum Opinion and Order*, 18 FCC Rcd 8428 (2003) (*MVDDS Order*)).

<sup>48</sup> 47 U.S.C. § 157. *See* AirTV March 17, 2004, *Ex Parte* Comments at 7. Section 7, 47 U.S.C. § 157(a), provides that "[i]t shall be the policy of the United States to encourage the provision of new technologies and services to the public. Any person or party (other than the Commission) who opposes a new technology or service proposed to be permitted under this Act shall have the burden to demonstrate that such proposal is inconsistent with the public interest."

<sup>49</sup> *Alenco Communications Inc., v. FCC*, 201 F.3d 608 at 615, n.3 (5th Cir., 2000) (stating that the provisions of Section 7 of the Act are "merely a broad statement of policy conferring substantial discretion on the Commission to determine how best to provide for new technologies and services").

16. We maintain our conclusion that deletion of the BSS allocation was not violative of international requirements, notwithstanding AirTV's arguments to the contrary.<sup>50</sup> We note that the U.S. Schedule of Specific Commitments to the WTO Basic Telecommunications Agreement includes an exemption from most-favored-nation obligations for the Direct-to-Home Fixed-Satellite Service (DTH-FSS), Direct Broadcast Satellite (DBS) service, and Digital Audio Radio Service (DARS).<sup>51</sup> Under this exemption, the U.S. is not required to extend most-favored-nation treatment for these satellite services in evaluating coordination requests from foreign administrations for applications to transmit into the territory of the U.S. by non-U.S. satellite systems. In addition, nothing in the U.S. Schedule of Specific Commitments or in the Commission's decision implementing the WTO decision, however, limits the exempted satellite services to a specific frequency band, in particular the DBS frequency band.<sup>52</sup> For this reason, the exemption applies to all signals transmitted or retransmitted by satellites that are intended for direct reception by the general public. Thus, we reject AirTV's assertion that, because BSS systems at 2500-2690 MHz are not part of the Commission's definition of DBS services in Section 25.201, the Commission's deletion of the BSS allocation from the band 2500-2690 MHz was precluded by the commitments the U.S. has under the WTO's GATS.<sup>53</sup> In addition, as we previously determined, under the WTO's GATS, the U.S. may also limit new satellite authorizations when incumbent operations face potential interference.<sup>54</sup> Furthermore, we agree with WCA's assertion that the Commission's decision to delete the BSS allocation does not discriminate against foreign licensees, because the decision affects both domestic and foreign systems in a non-discriminatory fashion.<sup>55</sup> This conforms to the WTO's GATS non-discrimination policies.

## V. CONCLUSION

17. Having reexamined our allocation decision, we remain convinced that it was properly decided based on interference mitigation concerns. We continue to believe, for the reasons discussed above, that simultaneous operation of BSS and terrestrial systems at 2520-2670 MHz would require parties to address matters of technical compatibility in order to make use of the band. Thus, we continue to find that the public interest is served by our deletion of the unused BSS allocation, and that our decision will prevent terrestrial licensees from incurring the costs of evaluating and mitigating the interference that any proposed BSS deployment – including the AirTV system examined herein – would be expected to cause to terrestrial systems.

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<sup>50</sup> See AirTV Petition at 7-9.

<sup>51</sup> See The United States of America Schedule of Specific Commitments, Supplement 2, at 3. The U.S. Schedule of Specific Commitments may be viewed on the World Trade Organization's web site at <[http://www.wto.org/english/tratop\\_e/serv\\_e/serv\\_commitments\\_e.htm#commit\\_exempt](http://www.wto.org/english/tratop_e/serv_e/serv_commitments_e.htm#commit_exempt)>. This site may also be accessed through a link on the International Bureau Home Page at the Commission's web site at <[www.fcc.gov/ib](http://www.fcc.gov/ib)>.

<sup>52</sup> See The United States of America Schedule of Specific Commitments, Supplement 2, at 3. See also Amendment of the Commission's Regulatory Policies to Allow Non-U.S. Licensed Space Stations to Provide Domestic and International Satellite Service in the United States, IB Docket No. 96-111, *Further Notice of Proposed Rulemaking*, 12 FCC Rcd 14220, 14228-29 (1997) (*WTO Implementation Further Notice of Proposed Rulemaking*); *id.*, *Report and Order*, 12 FCC Rcd 24094, 24135 (1997) (*WTO Implementation Order*).

<sup>53</sup> See AirTV Petition at 7-9.

<sup>54</sup> See *S-Band Allocation Order*, 18 FCC Rcd at 23445, ¶ 47. See also GATS Annex 1B, Annex on Telecommunications, at 315.

<sup>55</sup> See WCA Opposition at 16.

**VI. PROCEDURAL MATTERS**

18. A Regulatory Flexibility Act analysis or certification, *see generally* 5 U.S.C. §§ 604-605, is not required because this order does not promulgate or revise any rules.

**VII. ORDERING CLAUSES**

19. Accordingly, IT IS ORDERED that, pursuant to Sections 4(i), 303(r), and 405 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 154(i), 303(r), and 405, and Section 1.429 of the Commission's Rules, 47 C.F.R. § 1.429, the Petition for Partial Reconsideration filed by AirTV Limited, is DENIED.

FEDERAL COMMUNICATIONS COMMISSION

Marlene H. Dortch  
Secretary