

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

In the Matter of
Amendment of the Commission's Policies and
Rules for Processing Applications in the
Direct Broadcast Satellite Service
Feasibility of Reduced Orbital Spacing for
Provision of Direct Broadcast Satellite Service in
the United States
IB Docket No. 06-160
Report No. SPB-196

NOTICE OF PROPOSED RULEMAKING

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By the Commission: Commissioners Copps and Adelstein approving in part, concurring in part, and
issuing a joint statement.

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**I. INTRODUCTION**

1. In this Notice of Proposed Rulemaking (*Notice*), we invite comment on revisions to our licensing procedures and technical rules governing direct broadcast satellite (DBS) Service. We propose service rules for GSO DBS space stations in the 12.2-12.7 GHz frequency band. We expect that adopting these procedures for DBS applications will expedite the provision of beneficial services to the public, just as these procedures have done in other satellite services.

2. The approaches we propose in the *Notice* are prompted, in part, by a recent decision by the U.S. Court of Appeals for the District of Columbia Circuit that the Commission’s July 2004 auction of DBS licenses was unauthorized.<sup>1</sup> The proposed rules would replace processing procedures that were designed to assign DBS licenses by auctions. If adopted, these rules will apply to any application for authority to provide DBS service to the United States using the 12.2-12.7 GHz band and associated feeder links in the 17.3- 17.8 GHz band, including unassigned channels at orbit locations assigned to the United States under the International Telecommunication Union (ITU) Region 2 Broadcasting Satellite Service and feeder-link Plans, as well as applications for DBS service from space stations located at orbital locations not assigned to the United States in the ITU Region 2 BSS and feeder-link Plans.<sup>2</sup>

**II. BACKGROUND**

**A. History of Direct Broadcast Satellite Service Serving the United States**

**1. Resources**

3. The DBS service is a radiocommunication service in which signals transmitted or retransmitted by space stations in the 12.2-12.7 GHz frequency band are intended for direct reception by the general public.<sup>3</sup> DBS space stations serving the United States are governed by Commission policies and rules. Their operation is also governed by international regulations administered by the International Telecommunication Union (ITU). The ITU regulations apportion spectrum and orbit locations for the broadcasting-satellite service (BSS)<sup>4</sup> in various geographic regions in certain planned frequency bands<sup>5</sup>

<sup>1</sup> *Northpoint Technology, Ltd. and Compass Systems, Inc. v. Federal Communications Commission*, 412 F.3d 145 (D.C. Cir. 2005) (*Northpoint v. FCC*).

<sup>2</sup> As described in more detail in the following paragraphs, the Commission has authorized only DBS satellites that are a minimum of nine degrees apart on the geostationary arc. Nine degree spacing derives from the International Telecommunication Union (ITU) Region 2 Broadcast Satellite Service Plan, which assigned to the United States eight DBS orbital locations, each spaced a minimum of nine degrees away from the next. In this NPRM, we refer to orbital locations other than those in the original Region 2 Plan as “reduced spacing” or “non-nine-degree-spaced” locations.

<sup>3</sup> See 47 C.F.R. § 25.201 and 25.202(a)(7).

<sup>4</sup> BSS is the international term used for a radiocommunication service in which signals transmitted or retransmitted by space stations are intended for direct reception by the general public. See also 47 C.F.R. § 2.1. DBS is the term used in the United States to describe the domestic implementation of the BSS international service in the 12.2-12.7 GHz frequency bands. See 47 C.F.R. § 25.201 at definition of “*Direct Broadcast Satellite Service*”; 47 C.F.R. § 25.202(a)(7).

<sup>5</sup> The provisions of Appendices 30 and 30A of the International Radio Regulations are applicable to the BSS in the frequency bands 11.7-12.2 GHz (Region 3), 11.7-12.5 GHz (Region 1) and 12.2-12.7 GHz (Region 2), and to their associated feeder links in the bands 14.5-14.8 GHz and 17.3-18.1 GHz (Regions 1 and 3) and 17.3-17.8 GHz (continued...)

on a regional basis among all nations through agreements reached at Regional and World Radiocommunication Conferences.<sup>6</sup> By contrast, orbital locations in the fixed-satellite service (FSS) are generally selected on a first-come, first-served basis and notified by national administrations and interference issues are resolved through satellite coordinations.<sup>7</sup> In the early 1980s, ITU members reached agreement on assigning BSS spectrum at specific orbit locations among the ITU's Region 2 member countries.<sup>8</sup> Under the terms of the Region 2 BSS and feeder link Plans, the United States is assigned eight orbital locations for providing broadcasting-satellite service.<sup>9</sup> The eight U.S. orbital positions, proceeding from east to west (all West Longitude), are 61.5°, 101°, 110°, 119°, 148°, 157°, 166°, and 175°. Three of these orbital locations -- 101° W.L., 110° W.L., and 119° W.L. -- can provide coverage of the 48 contiguous United States (CONUS). Each of the eight orbital locations is capable of providing 32 analog channels, each using 24 megahertz of bandwidth.<sup>10</sup> Currently, U.S. DBS orbit assignments are separated by at least nine degrees. The nine-degree orbital spacing in the DBS service enables subscribers to use earth station antennas that are smaller than those generally employed for C and Ku-band services.<sup>11</sup>

4. Policies and rules for the DBS service in the United States were first set forth by the Commission in its *1982 DBS Report and Order*.<sup>12</sup> The Commission envisioned that DBS would be

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(Region 2). Other BSS allocations are not subject to the provisions of these Plans. The Regional Administrative Radio Conference in 1983 (RARC-83) developed and adopted the Region 2 BSS and feeder-link Plans. ITU Region 2 includes North, Central, and South America and Greenland. See Article 5, Section 1 of the ITU Radio Regulations. The Regions 1 (Europe and Africa) and 3 (Asia-Pacific) BSS Plan became a part of the ITU Radio Regulations in 1977 at the World Administrative Radio Conference for Planning of the Broadcasting-Satellite Service (WARC-77). The Regions 1 and 3 feeder-link Plan became a part of the ITU Radio Regulations in 1988 at the World Administrative Radio Conference (WARC Orb-88). It was not until 1985, at the World Administrative Radio Conference (WARC Orb-85), that the Region 2 Plans were adopted internationally worldwide and became a part of the ITU's Radio Regulations. The ITU Region 2 BSS Plan is comprised of the Plan for BSS in the band 12.2-12.7 GHz in ITU Region 2, as contained in Appendix 30 of the ITU Radio Regulations, and the associated Plan for the feeder-links in the frequency band 17.3-17.8 GHz for the broadcasting-satellite service in Region 2, as contained in Appendix 30A of the ITU Radio Regulations.

<sup>6</sup> *Id.* See also Policy and Rules for the Direct Broadcast Satellite Service, *Notice of Proposed Rulemaking*, IB Docket No. 98-21, 13 FCC Rcd 6907 (*DBS NPRM*) at ¶ 6.

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

<sup>8</sup> ITU Region 2 includes North, Central, and South America, and Greenland. See Article 5, Section 1 of the ITU Radio Regulations. The Region 2 BSS Plan includes service links in the 12.2-12.7 GHz band and associated feeder links in the 17.3-17.8 GHz band. A feeder link is a transmission path between a space station and a "gateway" earth station. In a BSS system, feeder links are used to uplink programming to the space station, where it is broadcast to subscribers' receiving earth station terminals. Feeder links operate in frequencies assigned to the fixed-satellite service (FSS).

<sup>9</sup> See Appendix 30 of the ITU's Radio Regulations.

<sup>10</sup> Digital compression enables operators to carry multiple video-programming services on each 24-megahertz DBS channel. Current technology permits up to 12 digital channels per 24 megahertz DBS channel. See, e.g. <http://www.lyngsat.com/packages/dish110.html> (visited on December 27, 2005) showing a large percentage of the transponders (24-megahertz DBS channels) carrying 12 digital channels of television programming. Anticipated technological advances are expected to further expand capacity.

<sup>11</sup> Earth station antennas with a diameter of 45 cm (18 inches) are commonly employed in the DBS service, whereas earth station antennas employed in the Ku-band Direct-to-Home FSS are generally on the order of 0.84 to 1 meter (36 inches) in diameter.

<sup>12</sup> See Inquiry into the Development of Regulatory Policy in Regard to Direct Broadcast Satellites for the Period following the 1983 Regional Administrative Radio Conference, *Report and Order*, 90 FCC2d 676 (1982), recon. denied, 53 RR2d 1637 (1983) (*1982 DBS Report and Order*). In the United States, satellite video services delivered

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primarily a broadcast service, but it left open the possibility that a DBS licensee could provide service on a subscription or common carrier basis.<sup>13</sup> This policy gave DBS providers the choice of being regulated as broadcasters, common carriers, or non-broadcast, non-common carriers. To date, all DBS licensees have chosen to offer subscription service on a non-broadcast, non-common carrier basis.<sup>14</sup>

5. The *1982 First DBS Report and Order* established rules for the DBS service collected at Part 100 of the Commission's Rules.<sup>15</sup> At that time, the Commission thought it unwise to impose technical standards in DBS, preferring to allow the nascent service freedom to develop innovative technology to meet market demand.<sup>16</sup> The Commission required only that the early DBS systems meet sharing criteria and technical characteristics adopted by the World Administrative Radio Conference.<sup>17</sup> In 1983, the ITU convened a Regional Administrative Radio Conference to plan BSS in ITU Region 2. The Region 2 BSS Plans were adopted, based on BSS space stations with one analog television signal per channel and up to 32 channels on 24-megahertz-bandwidth transponders. The Plans defined orbital locations, satellite antenna beam footprints, and the maximum effective isotropically radiated power (EIRP) for BSS satellites in ITU Region 2. According to the Region 2 BSS Plan, subscriber receivers would use antennas with a diameter of one meter.

6. The nominal orbital locations assigned to the United States under the Region 2 BSS Plans are spaced a minimum of nine degrees apart. The ITU Radio Regulations state that satellites may be placed within a cluster of locations extending  $\pm 0.2^\circ$  on either side of the nominal orbital location.<sup>18</sup> Section 25.210(j) of the Commission's rules states that satellites in the geostationary satellite orbit must be maintained within  $\pm 0.05^\circ$  of their assigned orbital location in the east/west direction.<sup>19</sup> In effect then, the U.S. DBS satellites at the Region 2 Plan locations assigned to the United States can be located as much as  $\pm 0.25^\circ$  east or west of the nominal orbital locations listed above.

## 2. Licensing Procedures

7. *Processing Rounds.* The Commission began accepting applications for authority to construct, launch, and operate DBS satellite systems pursuant to the "interim" DBS service rules that it

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directly to subscriber homes are provided in two separate sets of frequency bands, each subject to a different regulatory framework: Direct-to-Home (DTH) satellite service and DBS service. DTH satellite service is provided in bands internationally allocated to the fixed-satellite service using FSS satellites. The FSS rules, including those applicable to satellites providing DTH service, are in Part 25 of the Commission's rules.

<sup>13</sup> *1982 DBS Report and Order*, 90 FCC2d 676, 708-709 at ¶ 84.

<sup>14</sup> The Commission has concluded that subscription video service is neither broadcast nor common carrier. In re Subscription Video Services, *Report and Order*, 2 FCC Rcd 1001 (1987), *aff'd sub nom. National Association for Better Broadcasting v. FCC*, 849 F.2d 665 (D.C. Cir. 1988), on reconsideration, *Memorandum Order and Opinion*, 4 FCC Rcd 4948 (1989) (*Subscription Video Order*). See also Application of MCI Telecommunications Corporation, Application for Authority to Construct, Launch and Operate a Direct Broadcast Satellite System at 110° W.L., *Memorandum Opinion and Order*, 14 FCC Rcd 11077 (1999).

<sup>15</sup> 47 C.F.R. Part 100. The Part 100 rules were in effect from 1982 to 2002, when the Part 100 DBS rules were merged into Part 25 of the Commission's rules. See Policies and Rules for the Direct Broadcast Satellite Service, *Report and Order*, 17 FCC Rcd 11331 (2002) (*Part 100 Order*).

<sup>16</sup> *1982 DBS Report and Order*, 90 FCC 2d at 716, ¶ 107.

<sup>17</sup> *Id.* 90 FCC 2d at 715, ¶ 103.

<sup>18</sup> See ITU Radio Regulations, Appendix 30, Annex 7, para. B, and Appendix 30A, Annex 3, para. 4.13.1.

<sup>19</sup> 47 C.F.R. § 25.210(j).

had adopted in 1982.<sup>20</sup> In assigning initial DBS licenses in 1982, the Commission employed a “processing round” approach. Under this approach, the Commission permitted all interested applicants to submit applications for the specific ITU DBS orbital locations and frequencies assigned to the United States under the ITU BSS Region 2 Plans by a specified date. The Commission would then consider these applications concurrently. Upon review of these applications, the Commission assigned each qualified applicant three to ten channels at individual orbital locations, based on the applicants’ requests, thus licensing several different service providers at the same location.<sup>21</sup> The Commission did not assign all 32 channels at a particular orbital location to a single applicant. The Commission instituted additional processing rounds in 1984, 1985, and 1988.<sup>22</sup>

8. *Auctions.* In 1993, Section 309(j) was added to the Communications Act, authorizing the Commission to employ auctions to assign spectrum licenses under certain circumstances.<sup>23</sup> In 1995, the Commission decided to award unassigned DBS channels by means of an auction.<sup>24</sup> In the *1995 DBS Auction Order*, the Commission also eliminated the east/west channel pairing method of assignment adopted in 1989<sup>25</sup> and created DBS geographic service requirements in order to stimulate service to

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<sup>20</sup> See Applications of CBS, Inc., Direct Broadcasting Satellite Corporation, Focus Broadcast Satellite Company, Graphic Scanning Corporation, RCA American Communications, Inc., United States Satellite Broadcasting Company, Inc., Video Satellite Systems, Inc., and Western Union Telegraph Company for Authority to Establish Interim Direct Broadcast Satellite Systems, *Memorandum Opinion Order*, 92 F.C.C. 2d 64 (1982); see also Processing Procedures Regarding the Direct Broadcast Satellite Service, *Memorandum Opinion Order*, 95 F.C.C. 2d 250 (1983).

<sup>21</sup> See *CBS, Inc.*, 92 FCC2d 64; Applications of CBS, Inc. Direct Broadcast Satellite Corporation, Graphic Scanning Corporation, RCA American Communications, Inc., and Western Union Telegraph Company for Modification of Construction Permits to Establish Interim Direct Broadcast Satellite Systems; Satellite Television Corporation, Dominion Video Satellite, Inc., and United States Satellite Broadcasting Co. Inc. for Further Modification of Construction Permits for Interim Direct Broadcast Satellite Systems, *Memorandum Opinion and Order*, 99 F.C.C. 2d 564 (1984).

<sup>22</sup> See Applications of Satellite Syndicated Systems, Inc., et al. for Authority to Establish Interim Direct Broadcast Satellite Systems, *Memorandum Opinion and Order*, 99 F.C.C.2d 1369 (1984); Applications of Tempo Enterprises, Inc. et al., for Modification of Construction Permit for Direct Broadcast Satellite System, *Memorandum Opinion and Order*, 1 FCC Rcd 20, 21 ¶ 10 (1986); Applications of Continental Satellite Corporation, et al. for Modification of Construction Permits for Direct Broadcast Satellite Systems, *Memorandum Opinion and Order*, 4 FCC Rcd 6292 (1989).

<sup>23</sup> Omnibus Budget Reconciliation Act of 1993, Pub. L. No. 103-66, Title VI § 6002(a), 107 Stat. 312, 387 (1993); 47 U.S.C. § 309(j). In addition to restricting the use of competitive bidding to mutually exclusive applications for “initial” licenses or construction permits, which limitations are still in place, Section 309(j) authorized competitive bidding only for services in which the principal use of the spectrum was likely to involve the licensee receiving compensation from subscribers.

<sup>24</sup> See Revision of Rules and Policies for the Direct Broadcast Satellite Service, *Report and Order*, 11 FCC Rcd 9712, 9779 ¶ 165 (1995) (*1995 DBS Auction Order*).

<sup>25</sup> The Commission had adopted a rule in 1989 that required channels at the eight orbital locations to be paired, with each licensee being assigned an equivalent number of channels at an eastern orbital location and at a western orbital location. This rule was adopted in order to assure service to the entire United States from at least 128 channels at a time when full-CONUS service was untested. The four eastern positions are: 61.5° W.L., 101° W.L., 110° W.L., and 119° W.L. The four western positions are: 148° W.L., 157° W.L., 166° W.L., and 175° W.L. For example, Direct Broadcasting Satellite Corporation, was assigned 11 channels at each of the 61.5° W.L. and 175° W.L. locations. R/L DBS was assigned 11 channels at each of the 61.5° W.L. and 166° W.L. locations. The *1995 DBS Auction Order* eliminated this policy. See *1995 DBS Auction Order*, 11 FCC Rcd 9712, 9760 at ¶ 124.

Alaska and Hawaii.<sup>26</sup> In 1996, the Commission conducted its first DBS auctions, one for 28 channels at the 110° W.L. orbital location and one for 24 channels at the 148° W.L. orbital location.<sup>27</sup> In 1997, Congress significantly revised the Commission's auction authority by amending Section 309(j) to require the Commission to choose among mutually exclusive applications for initial licenses or permits using competitive bidding procedures, except in the case of certain limited classes of licenses.<sup>28</sup>

9. In 2000, Congress enacted Section 647 of the ORBIT Act, prohibiting the Commission from using competitive bidding to assign orbital locations or spectrum used "for the provision of international or global satellite communications services."<sup>29</sup> In January 2004 the Commission concluded that it retained the authority to auction DBS licenses for channels at orbital locations assigned to the United States under the ITU Region 2 Band Plan because these licenses are used to provide a domestic service and therefore are not subject Section 647's auction prohibition.<sup>30</sup> On July 14, 2004, the Commission held Auction No. 52, which offered three DBS licenses authorizing operations at the western orbital locations of 175° W.L. (32 channels), 166° W.L. (32 channels), and 157° W.L. (29 channels). Rainbow DBS Company LLC (Rainbow DBS) won the 175° W.L. and 166° W.L. licenses, and EchoStar Satellite LLC (EchoStar) won the 157° W.L. license.<sup>31</sup>

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<sup>26</sup> See 47 C.F.R. § 25.148(c), (formerly 47 C.F.R. § 100.53). The new geographic service rules condition all DBS licenses awarded after January 19, 1996 on providing service to Alaska and Hawaii, "where such service is technically feasible."

<sup>27</sup> The channels at the 110° W.L. and 148° W.L. locations became available when the previous assignee, Advanced Communications Corp., failed to meet its due diligence obligations for use of its assigned channels at those locations. Advanced Communications Corp., *Memorandum Opinion and Order*, 10 FCC Rcd 13337, 13343 ¶ 20 (1995), *aff'd Memorandum Opinion and Order*, 11 FCC Rcd 3399 (1995), *aff'd, Advanced Communications Corp. v. FCC*, 84 F.3d 1452 (D.C. Cir. 1996), *cert. denied*, 117 S.Ct. 718 (1997). MCI Telecommunications, Corp. won the auction for the channels at the 110° W.L. location, and EchoStar Satellite Corp. won the auction for the channels at the 148° W.L. location.

<sup>28</sup> Balanced Budget Act of 1997, Pub. L. No 105-33, Title III, 111 Stat. 251 (1997) (BBA). See also 47 U.S.C. §§ 309(j)(1) & (2). The classes of licenses exempted from auctions under Section 309(j) are licenses and construction permits for public safety radio services, digital television service licenses and permits given to existing terrestrial broadcast licensees to replace their analog television service licenses, and licenses and construction permits for noncommercial educational broadcast stations and public broadcast stations under 47 U.S.C. § 397(6). Following the enactment of the BBA, the Commission adopted rules and policies defining the framework for exercise of its auction authority in light of the statute's revisions to Section 309(j). See Implementation of Sections 309(j) and 337 of the Communications Act of 1934 as Amended; Promotion of Spectrum Efficient Technologies on Certain Part 90 Frequencies; Establishment of Public Service Radio Pool in the Private Mobile Frequencies Below 800 MHz; Petition for Rule Making of the American Mobile Telecommunications Association, *Report and Order and Further Notice of Proposed Rule Making*, 15 FCC Rcd 22709 (2000); Implementation of Sections 309(j) and 337 of the Communications Act of 1934 as Amended, *Memorandum Opinion and Order*, 17 FCC Rcd 7553 (2002).

<sup>29</sup> Open-Market Reorganization for the Betterment of International Telecommunications Act, Pub. L. No. 106-180, 114 Stat. 48 § 647 (enacted Mar. 12, 2000), codified at 47 U.S.C. § 765f (ORBIT Act). Section 647 states: "Notwithstanding any other provision of law, the Commission shall not have the authority to assign by competitive bidding orbital locations or spectrum used for the provision of international or global satellite communications services. The President shall oppose in the International Telecommunication Union and in other bilateral and multilateral fora any assignment by competitive bidding of orbital locations or spectrum used for the provision of such services."

<sup>30</sup> Auction of Direct Broadcast Satellite Licenses, *Order*, 19 FCC Rcd 820 (2004) (*2004 DBS Auction Order*); Open-Market Reorganization for the Betterment of International Telecommunications Act, Pub. L. No. 106-180, 114 Stat. 48 § 647 (enacted Mar. 12, 2000), codified at 47 U.S.C. § 765f (ORBIT Act).

<sup>31</sup> *Public Notice*, Direct Broadcast Satellite Service Licenses Auction Closes; Winning Bidders Announced, Report No. AUC-04-52-I, 19 FCC Rcd 13193 (2004).

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10. *Subsequent History.* Northpoint Technology, Ltd., and its subsidiary Compass Systems, Inc. (collectively, Northpoint) petitioned the U.S. Court of Appeals for the District of Columbia Circuit (the Court) for review of the Commission's 2004 DBS Auction Order.<sup>32</sup> Northpoint challenged the Commission's interpretation of Section 647 of the ORBIT Act. In its decision, the D.C. Circuit held that the Commission's construction of the ORBIT Act to exclude DBS from the auction prohibition could not withstand judicial scrutiny based on the record.<sup>33</sup> Although the Court found it reasonable to construe the ORBIT Act as not prohibiting auctions of licenses for domestic satellite services, it nevertheless rejected as unreasonable the Commission's determination that DBS was such a domestic satellite service based on the existing record.<sup>34</sup>

11. The Court vacated Part III.A of the *DBS Auction Order*.<sup>35</sup> The Court therefore held that Auction No. 52, the most recent auction of DBS spectrum, was unauthorized, and remanded for our further consideration.<sup>36</sup> The Commission then nullified the results of Auction No. 52, refunded the winning bid payments, and adopted a freeze on applications for new DBS service.<sup>37</sup>

12. *First-Come, First-Served Procedure.* In 2003, the Commission revised its licensing procedures for all satellite applications except for DBS and Digital Audio Radio Service (DARS) applications.<sup>38</sup> The Commission adopted a first-come, first-served procedure for GSO satellite

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<sup>32</sup> Northpoint Technology, Ltd. and Compass Systems, Inc., Petitioners v. Federal Communications Commission, Respondent, No. 04-1052, U.S. Court of Appeals for the District of Columbia Circuit.

<sup>33</sup> Northpoint Technology, Ltd. and Compass Systems, Inc. v. Federal Communications Commission, 412 F.3d 145, 156 (D.C. Cir. 2005) (*Northpoint v. FCC*).

<sup>34</sup> The Court's decision is based on three principal reasons. First, the Court held that the ITU Region 2 Band Plan was not "a basis for treating DBS as a solely domestic satellite communications service ... in light of the policy [the Commission] announced in *DISCO I*." *Northpoint v. FCC*, 412 F.3d at 152-53. Specifically, in *DISCO I* the Commission recognized that the Region 2 Plan "does not preclude the provision of international DBS service" and may be modified to permit such service. Amendment to the Commission's Regulatory Policies Governing Domestic Fixed Satellites and Separate International Satellite Systems, *Report and Order*, 11 FCC Rcd 2429 (1996) (*DISCO I*). In its 1995 *DISCO I* Order, the Commission adopted a policy that permits all U.S.-licensed FSS systems, mobile satellite services (MSS) systems, and DBS service systems to offer both domestic and international services without further regulatory approval. In adopting *DISCO I*, the Commission recognized the emergence of a global satellite marketplace and held that a policy of regulatory parity would benefit users of satellite services by enhancing competition, increasing available capacity, and encouraging innovation in services at lower prices to consumers. *DISCO I*, 11 FCC Rcd at 2434 ¶ 33. Subsequently, in *DISCO II*, the Commission expanded the policies of *DISCO I* to allow non-U.S. licensed space stations to provide satellite service in the United States. See Amendment of the Commission's Regulatory Policies to Allow Non-U.S. Licensed Satellites Providing Domestic and International Service in the United States, *Report and Order*, 12 FCC Rcd 24094 (1997) (*DISCO II*). Second, the court further held that the Band Plan does not present a substantive bar to international service. Third, the court found that the Commission had failed to distinguish DBS service, which the Commission characterized as primarily a domestic service, from non-geostationary satellite orbit FSS service operating in the same bands as DBS, which the Commission characterized as international. *Northpoint v. FCC*, 145 F.3d at 154.

<sup>35</sup> *Northpoint v. FCC*.

<sup>36</sup> *Id.*

<sup>37</sup> Direct Broadcast Satellite Service Auction Nullified: Commission Sets Forth Refund Procedures for Auction No. 52 Winning Bidders and Adopts a Freeze on All New DBS Service Applications, *Public Notice*, FCC 05-213 (rel. Dec. 21, 2005). (*DBS Applications Freeze*).

<sup>38</sup> See Amendment of the Commission's Space Station Licensing Rules and Policies, *First Report and Order and Further Notice of Proposed Rulemaking*, 18 FCC Rcd 10760, 10764-765 at n. 4 (2003) (*First Space Station Reform Order*).

applications in lieu of the previously-used processing round approach for these systems. Under a first-come, first-served processing approach, the Commission considers applications in the order they are filed, down to the millisecond of timing. If a qualified applicant files an application that is not technically incompatible with any licensed system or a previously filed application, the Commission will grant it. In the event that two mutually exclusive GSO-like applications are filed in the same millisecond, the Commission considers them together, and if both applicants are qualified and both applications are otherwise grantable, the Commission licenses each to operate in half the spectrum at that orbit location.<sup>39</sup> The Commission excluded DBS from the revised space station processing rules (including the performance bond requirements of Section 25.165)<sup>40</sup> because, at that time, the Commission used competitive bidding to award DBS licenses.

## **B. DBS Operations in the United States from Locations with Nine-Degree Orbital Spacing**

13. *Full-CONUS Operations:* Two companies hold Commission authorizations to provide service from the full-CONUS orbital locations. EchoStar, through its affiliates, is authorized to provide DBS service using 21 channels at the 119° W.L. orbital location and 29 channels at the 110° W.L. orbital location. DIRECTV is authorized to provide DBS service using 11 channels at the 119° W.L. orbital location, three channels at the 110° W.L. orbital location, and 32 channels at the 101° W.L. orbital location. Combined, these two Commission-licensed DBS providers operate from all three full-CONUS orbital locations using all 96 channels assigned to these locations for DBS service. There are currently two or more operational DBS satellites at each of the three full-CONUS locations which, in combined operation, use all 32 channels at each location.

14. *Eastern and Western United States Operations.* Two companies are authorized to provide service from the 32 channels at the 61.5° W.L. orbital location serving the eastern United States: EchoStar and Dominion Video, Inc. (Dominion). EchoStar is assigned 22 channels at the location, and operates pursuant to special temporary authority on an additional two channels.<sup>41</sup> Dominion holds the license to operate the remaining eight channels. These channels are operated by EchoStar and Dominion, through a commercial arrangement, over the EchoStar-3 satellite. EchoStar is authorized to provide service from the 32 channels at the 148° W.L. orbital location, serving the western United States. It is operating two satellites at that location on all 32 channels.

15. *Operations by Foreign-Licensed DBS Systems.* In 2004, the Commission authorized DIRECTV to transfer its DIRECTV 5 satellite to Canadian jurisdiction under an arrangement that permits DIRECTV to serve U.S. customers from an orbital location assigned to Canada in the Region 2 Plan.<sup>42</sup> The Bureau also granted DIRECTV a license for one million receive-only earth stations to be located in the United States to receive signals from DIRECTV 5.<sup>43</sup> DIRECTV 5 has since been replaced at the 72.5°

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<sup>39</sup> *First Space Station Reform Order*, 18 FCC Rcd at 10783-84, ¶ 51.

<sup>40</sup> See 47 C.F.R. § 25.165. This rule requires satellite licensees to post a bond within 30 days of licensing.

<sup>41</sup> Rainbow DBS Company LLC, Assignor and Echostar Satellite L.L.C., Assignee, Consolidated Application for Consent to Assignment of Space Station and Earth, *Memorandum Opinion and Order*, FCC 05-177 (rel. Oct. 12, 2005).

<sup>42</sup> Application of DIRECTV Enterprises, LLC, Request for Special Temporary Authority for the DIRECTV 5 Satellite, File No. SAT-STA-20040107-00002; Application of DIRECTV Enterprises, LLC, Request for Blanket Authorization for 1,000,000 Receive Only Earth Stations to Provide Direct Broadcast Satellite Service in the U.S. using the Canadian Authorized DIRECTV 5 Satellite at the 72.5° W.L. Broadcast Satellite Service, *Order and Authorization*, DA 04-2526, 19 FCC Rcd 15529 (2004) (*DIRECTV 5 Blanket Earth Station License*). Canada filed a Region 2 Plan modification in order to permit service to the United States from this location.

<sup>43</sup> *Id.*



W.L. orbital location by the DIRECTV 1 satellite.<sup>44</sup> In addition, the Commission authorized the Canadian Nimiq satellites to serve DBS customers in the United States.<sup>45</sup>

### C. Operations from Reduced-Spacing Orbital Locations

16. In 2002, the Commission took notice of the possibility of DBS operations in the United States from orbital locations spaced less than nine degrees apart.<sup>46</sup> In the *Part 100 Order*, the Commission stated that provision of service “into the United States from future entrants such as non-U.S. DBS satellites could result in *smaller* satellite spacing than the current nine-degree separation between U.S. DBS orbital locations. The orbital spacing between satellites serving the same geographic area, combined with both the satellite transmit characteristics and receive earth station antenna performance, determines the amount of interference a DBS system will receive.”<sup>47</sup> In that Order, the Commission adopted Section 25.114(c)(22)(i), which required that applicants provide sufficient technical showing that their proposed system could operate satisfactorily if all assignments in the BSS and feeder-link Plans are implemented.<sup>48</sup> The Commission also stated that in accordance with the International Radio Regulations, other countries wishing to serve the United States will normally have to modify their assignments in the ITU BSS and feeder link Plans to allow them to provide service here.<sup>49</sup> That process will identify the U.S. DBS systems that are affected by the proposed Plan modification of another Administration, giving the United States an opportunity to work with the Administration proposing the Plan modification to ensure that no modification is made that will cause harmful interference to U.S. DBS systems. Considering these factors, the Commission found it unnecessary to adopt DBS receive earth station antenna performance requirements.<sup>50</sup>

17. Prior to imposition of the DBS application freeze, the Commission received a number of filings from satellite operators requesting authority to provide DBS service to U.S. consumers from non-U.S. assigned reduced-spacing BSS orbital locations. These requests include (1) a Petition for Declaratory Ruling from SES AMERICOM to serve the United States from the 105.5° W.L. orbital location;<sup>51</sup> (2) applications from EchoStar for a license to launch and operate a DBS satellite to serve the United States from the 86.5° W.L. orbital location;<sup>52</sup> and (3) a Petition for Declaratory Ruling filed by

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<sup>44</sup> On July 14, 2005, the International Bureau’s Satellite Division granted DIRECTV special temporary authority to relocate the DIRECTV 1 satellite from the 101.125° W.L. orbital location to the 72.5° W.L. orbital location. *See Applications of DIRECTV Enterprises LLC, Order and Authorization*, DA 05-1890 (rel. July 14, 2005).

<sup>45</sup> Digital Broadband Applications Corp., *Order*, 18 FCC Rcd 9455 (Int’l Bur. 2003) (authorizing Digital Broadband Applications Corp. to provide two-way broadband data and video service using one million satellite home terminals in the United States from two Canadian-authorized DBS satellites (Nimiq 1 and Nimiq 2) at orbital locations (91° W.L. and 82° W.L.) designated for Canada in the ITU Region 2 Plan. *See also Pegasus Development Corp., Order*, 19 FCC Rcd 6080 (Int’l Bur. 2004) (service to one million home terminals from Nimiq 1 and Nimiq 2).

<sup>46</sup> We observe that all co-channel and co-coverage orbital location assignments in the Region 2 Plans were spaced a minimum of nine degrees apart. Therefore, DBS locations assigned to different nations may be less than nine degrees apart if their original plan assignments were not co-coverage.

<sup>47</sup> *Part 100 Order*, 17 FCC Rcd at 11391, ¶ 129 (emphasis added).

<sup>48</sup> This rule section has since been renumbered § 25.114(d)(13)(i).

<sup>49</sup> *Part 100 Order*, 17 FCC Rcd at 11391-92 ¶ 130.

<sup>50</sup> *Part 100 Order*, 17 FCC Rcd at 11391-92 ¶ 130.

<sup>51</sup> SES AMERICOM, Inc. Petition for Declaratory Ruling to Serve the U.S. Market Using BSS Spectrum at the 105.5° W.L. Orbital Location, IBFS File No. SAT-PDR-20020425-00071 (filed April 25, 2002) (SES AMERICOM PDR).

<sup>52</sup> Application of EchoStar Satellite Corporation for Authority to Construct, Launch and Operate a Direct Broadcast Satellite in the 12.2-12.7 GHz and 17.3-17.8 GHz Frequency Bands at the 86.5° W.L. Orbital Location, IBFS File

(continued...)

Spectrum Five LLC to serve the United States from two Netherlands-authorized satellites at the 114.5° W.L. orbital location.<sup>53</sup> On September 5, 2003, DIRECTV filed a petition for Rulemaking to consider the feasibility of reduced DBS spacing.<sup>54</sup> In its petition, DIRECTV proposed the following protection criteria to safeguard existing nine-degree-spaced DBS systems: (1) a 24 dB single-entry carrier-to-interference ratio (C/I) for interference into the existing DBS system, based on the use of a 45-cm subscriber antenna meeting the antenna gain pattern mask of ITU-R Recommendation BO.1213, with 0.5 degree maximum pointing error, and a 1.05 dB “bandwidth advantage” factor due to the use of opposite polarizations or a frequency offset; and (2) a 24 dB single-entry C/I level based on the use of 1-meter receive antenna for Alaska and Hawaii. DIRECTV also proposed that the single-entry C/I for interference from existing systems to the new DBS systems spaced less than 9 degrees from existing systems be 12 dB and that we require that such new systems use subscriber antennas with a minimum size of 75 cm with a zero pointing-error assumption for interference calculation purposes.<sup>55</sup> DIRECTV proposed that any new orbital locations that the Commission should make available should be granted according to the Commission’s auction procedures.<sup>56</sup> DIRECTV also proposed that any foreign-licensed DBS systems seeking U.S. market access must abide by all U.S. service rules governing DBS and non-nine-degree DBS locations.<sup>57</sup>

18. In December 2003, the International Bureau (Bureau) sought comments on the SES AMERICOM, EchoStar, and DIRECTV filings, as well as any other proposals, suggestions or recommendations for establishing new orbital spacing for DBS in the United States.<sup>58</sup> Commenters were asked to provide substantive information and data, including technical studies and reports, and to address all relevant technical aspects of operating in a less than nine-degree spacing environment. In addition, the Bureau set forth a list of eight specific technical issues for comment and stated that the comments it received in response to the *DBS Reduced Spacing Public Notice* may form the basis for determining whether and, if so, how a more comprehensive review of the feasibility of and the modification of our rules to permit licensing U.S. DBS satellites at less than nine-degree spacing should be undertaken. Thirteen parties filed comments in response to this public notice, and seven parties filed reply comments.

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No. SAT-LOA-20030609-00113 (Filed June 9, 2003) (EchoStar 86.5° W.L. Application). EchoStar also applied for authority at the 96.5° W.L., 114.5° W.L., and the 123.5° W.L. orbital locations, but later withdrew those applications. See letter from Pantelis Michalopoulos and Philip L. Malet, Counsel for EchoStar Satellite L.L.C., to Marlene Dorch, Secretary, FCC (April 4, 2005). See also Satellite Policy Branch Information, *Public Notice*, Report No. SAT-00171 (rel. October 10, 2003) (Int’l Bur. 2003), Satellite Policy Branch Information, *Public Notice*, Report No. SAT-00283 (rel. April 8, 2005) (Int’l Bur. 2003) (dismissing the EchoStar applications for DBS space stations at the 114.5°, 123.5°, and 96.5° W.L., orbital locations).

<sup>53</sup> See Spectrum Five LLC, Petitions for Declaratory Ruling To Serve the U.S. Market Using BSS Spectrum from the 114.5° W.L. Orbital Location, File Nos. SAT-LOI-20050312-00062 (Call Sign S2667) and SAT-LOI-20050312-00063 (Call Sign S2668) (filed March 12, 2005) (“Spectrum Five Petitions”).

<sup>54</sup> Petition of DIRECTV Enterprises, LLC for a Rulemaking on the Feasibility of Reduced Orbital Spacing in the U.S. Direct Broadcast Satellite Service (filed September 5, 2003). (DIRECTV Petition).

<sup>55</sup> DIRECTV based its recommendation on the fact that WRC-2000 adopted an aggregate protection ratio of 21 dB for co-channel signals in order to protect digital assignments from digital emissions in Regions 1 and 3. See DIRECTV Petition at 17, note 23.

<sup>56</sup> DIRECTV Petition at 18.

<sup>57</sup> *Id.* at 19.

<sup>58</sup> International Bureau Seeks Comments on Proposals to Permit Reduced Orbital Spacings Between U.S. Direct Broadcast Satellites, *Public Notice*, Report No. SPB-196, 18 FCC Rcd 25683 (2003). (*DBS Reduced Spacing Public Notice*).

The Bureau has also separately sought comment on the individual reduced spacing DBS applications and petitions filed by SES AMERICOM,<sup>59</sup> Spectrum Five and EchoStar.<sup>60</sup>

### III. NOTICE OF PROPOSED RULEMAKING

19. In this *Notice*, we initiate a rulemaking to establish an approach for processing applications to provide DBS service to U.S. consumers. These rules would apply to any application for authority to provide DBS service to the United States using the 12.2-12.7 GHz band and associated feeder links in the 17.3- 17.8 GHz band, including unassigned channels at orbit locations assigned to the United States under the International Telecommunication Union (ITU) Region 2 Broadcasting Satellite Service and feeder-link Plans, as well as applications for DBS service from space stations located at orbital locations not assigned to the United States in the ITU Region 2 BSS and feeder-link Plans.

20. Specifically, we seek comment on using first-come, first-served processing procedures for all DBS applications,<sup>61</sup> regardless of the proposed orbit location. Alternatively, we seek comment on whether DBS should continue to be licensed outside the scope of the *First Space Station Licensing Reform Order's* first-come, first-served processing procedures, and if so, what processing framework should be used to license DBS. We specifically seek comment on whether, pursuant to Section 309(j) of the Communications Act, and in light of the *Northpoint* case, we could design a competitive bidding system, or auction, to assign mutually exclusive applications for DBS licenses or spectrum. We also seek comment on: (a) what additional issues the Commission should consider in situations involving non-nine-degree spaced DBS applications; (b) whether all the streamlined satellite license procedures (*e.g.*, performance bonds, milestones, and annual reports) should apply to DBS systems; (c) how to resolve impasses in operator-to-operator coordination negotiations; (d) whether new license terms should be adopted for all current and future U.S.-licensed DBS systems; and (e) other issues, including methods (if any) of addressing the impact of reduced spacing DBS on other services.

21. As a threshold matter, we observe that up until the recent *Northpoint* ruling by the U.S. Court of Appeals for the D.C. Circuit, applications for DBS licenses to operate at any orbital location assigned to the United States under the ITU Region 2 Plan were filed in accordance with an auctions track, as specified by Section 25.148(d) and (e) of the Commission's rules.<sup>62</sup> This track included both filing requirements for applications and a method by which to process them. Given the recent *Northpoint* ruling by the U.S. Court of Appeals for the D.C. Circuit,<sup>63</sup> however, we cannot conduct an auction to

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<sup>59</sup> Satellite Policy Branch Information, Space Station Applications Accepted for Filing, *Public Notice*, Report No. SAT-00110, (rel. May 17, 2002).

<sup>60</sup> Satellite Policy Branch Information, Space Station Applications Accepted for Filing, *Public Notice*, Report No. SAT-00284 (rel. April 15, 2005).

<sup>61</sup> As used in this NPRM, unless otherwise indicated, the term "DBS applications" refers to any application, including requests for market access relating to a foreign-licensed space station, for authority to provide DBS service to the United States using the 12.2-12.7 GHz band and associated feeder links in the 17.3- 17.8 GHz band, including unassigned channels at orbit locations assigned to the United States under the ITU Region 2 BSS and feeder-link Plans as well as requests to provide DBS service from space stations located at orbital locations not assigned to the United States in the ITU Region 2 BSS and feeder-link Plans (requests by both foreign and domestic operators).

<sup>62</sup> 47 C.F.R. §25.148.

<sup>63</sup> The United States Court of Appeals for the District of Columbia Circuit held that the Commission's construction of the ORBIT Act to exclude DBS from the auction prohibition could not withstand judicial scrutiny based on the record. *See Northpoint Technology, Ltd. and Compass Systems, Inc. v. Federal Communications Commission*, No. 04-1052 (D.C. Cir. June 21, 2005) ("*Northpoint v. FCC*") (*citing* Section 647 of the Open-Market Reorganization for the Betterment of International Telecommunications Act ("ORBIT Act"), Pub. L. No. 106-180, § 647, 114 Stat.

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award DBS licenses unless we change our current policy that permits DBS licensees to provide both domestic and international services.<sup>64</sup> Consequently, we cannot now use the auction filing requirements. Nevertheless, residual application filing requirements exist for DBS applications – *i.e.*, the general application filing requirements set forth in Sections 25.114 and 25.156 of the Commission’s rules. In 2002, when the Commission merged the Part 100 rules governing DBS into Part 25,<sup>65</sup> these sections became applicable on their face to DBS and can consequently be used for any DBS space station authorization application that was not covered by a more specific filing procedure.<sup>66</sup> Thus, for DBS applications that specified operations at locations other than the eight U.S. orbital locations covered by the ITU Region 2 Plan – and which were consequently ineligible for filing under the auction rules – the filing requirements under Sections 25.114 and 25.156 applied.<sup>67</sup> There have been, however, no processing rules in place for such applications; the only processing track currently in our rules for DBS is the now-defunct auctions track, which, prior to *Northpoint*, clearly applied to ITU Region 2 Plan locations only. Despite the lack of specific rules, we can process the DBS applications for non-ITU Region 2 Plan locations that are currently on file on an *ad hoc* basis, pursuant to our existing statutory authority.<sup>68</sup> Specifically, given our general statutory authority under Sections 308 and 309 of the Communications Act, coupled with the application filing requirements and rules regarding non-interference showings, we may process the existing DBS applications provided that they are complete and consistent with the public interest, convenience, and necessity.<sup>69</sup> Any application granted prior to resolution of this proceeding would be conditioned upon operator to operator coordination and the applicant would be required to comply with the outcome of this proceeding.

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48 (2000), *as amended*, Pub. L. No. 107-233, 116 Stat. 1480 (2002), *as amended* Pub. L. No. 108-228, 118 Stat. 644 (2004), *as amended*, Pub. L. No. 108-371, 118 Stat. 1752 (2004) (codified at 47 U.S.C. § 765f).

<sup>64</sup> Amendment to the Commission’s Regulatory Policies Governing Domestic Fixed Satellites and Separate International Satellite Systems, *Report and Order*, 11 FCC Rcd 2429 (1996).

<sup>65</sup> See Policies and Rules for the Direct Broadcast Satellite Service, *Report and Order*, IB Docket No. 98-21, 17 FCC Rcd 11331 (2002) (“*Part 100 Order*”).

<sup>66</sup> For example, under Section 25.114, item 13 in the required narrative that must accompany each satellite application applies specifically to DBS satellites. 47 C.F.R. § 25.114(d)(13).

<sup>67</sup> Thus, while the filing procedures of Sections 25.114 and 25.156 cover the filing of DBS space station authorization applications, the general Part 25 first-come, first-served processing provisions for deciding whether to grant applications for space station authorizations do not apply to the DBS service. See Amendment of the Commission’s Space Station Licensing Rules and Policies, *First Report and Order and Further Notice of Proposed Rulemaking* in IB Docket No. 02-34, 18 FCC Rcd 10760, 10764-65 n.4 (2003) (noting that Commission was excluding DBS from rule changes adopted in proceeding that culminated in the first-come, first-served procedures for geostationary satellite orbit (GSO)-like systems); *but see* Amendment of the Commission’s Space Station Licensing Rules and Policies, *Third Report and Order and Second Further Notice of Proposed Rulemaking* in IB Docket Nos. 02-34 and 00-248, 18 FCC Rcd 13486, 13492-93 (2003) (making exception to the exclusion of DBS from proceeding, by ruling that the new Schedule S filing requirements adopted in connection with Section 25.114 would apply to DBS service applications).

<sup>68</sup> We note that there are no pending DBS applications for Region 2 Plan locations filed after the *Northpoint* decision.

<sup>69</sup> See 47 C.F.R. §§ 25.114(d)(13), 25.156(a); 47 U.S.C. § 308(a) (stating that “the Commission may grant construction permits and station licenses . . . only upon written application therefore received by it”); § 308(b) (requiring that Section 308(a) applications set forth “such facts as the Commission by regulation *may* prescribe,” but not requiring the Commission to prescribe such regulations) (emphasis added); § 309(a) (stating that “the Commission shall determine . . . whether the public interest, convenience, and necessity will be served by the granting of [a Section 308] application,” and, if so, the Commission “shall grant such application”). 47 U.S.C. §§ 308, 309.

### A. Licensing Procedures

22. In the *First Space Station Licensing Reform Order*, the Commission adopted various procedural reforms to expedite the licensing process for most satellite services, with an exception for DBS and the Digital Audio Radio Satellite (DARS) Service.<sup>70</sup> In light of the *Northpoint* decision, we request comment on the appropriate procedures to be used in licensing future DBS systems.

23. We propose to treat applications for GSO DBS space stations at both Region 2 Plan orbital locations and reduced spacing locations under a “first-come, first-served” licensing approach.<sup>71</sup> We seek comment on this proposal. We also propose that the first-come, first-served license procedures, if adopted for DBS, should also apply to requests from foreign-licensed DBS space station operators to serve the United States.<sup>72</sup> We note that the Commission decided in the *DISCO II* proceeding that entities wishing to serve the United States with a non-U.S. satellite, including DBS satellites, must file the same information as applicants for a U.S. space station license, whether or not that satellite is already licensed by another administration.<sup>73</sup> Consequently, if we adopt a first-come, first-served licensing procedure, foreign-licensed DBS operators seeking U.S. market access<sup>74</sup> and entities filing earth station applications to access foreign-licensed DBS satellites must file the same information requested under Section 25.114 of the Commission’s rules that U.S. DBS applicants must file (including, without limitation, the technical characteristics of the satellite as specified in Sections 25.114(c) and 25.114(d)(1)-(5) and the analyses required under Section 25.114(d)(13)).<sup>75</sup>

24. Our experience with the first-come, first-served approach indicates that it would also allow us to issue licenses for DBS satellites quickly, while still accommodating existing or new competitive systems in the same spectrum. Further, this approach would give applicants flexibility to design systems that will best serve their targeted customers. As evidenced by the reduced-spacing DBS applications and petitions received to date,<sup>76</sup> reduced spacing proposals are likely to vary based on the location selected, the operating parameters of adjacent operators, and the applicant’s own system design. These factors would then guide the ITU agreement-seeking process, which must be completed before a proposed modification can be entered into the Region 2 Plans. We believe that the first-come, first-served approach permits interested parties to find, through the negotiation process, the most suitable technical solutions to operate DBS satellites. We seek comment on this approach for processing future applications and petitions to operate all DBS satellites in the 12.2-12.7 GHz service bands.

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<sup>70</sup> *First Space Station Licensing Reform Order*, 18 FCC Rcd at 10764, n. 4. These rules became effective on August 27, 2003.

<sup>71</sup> 47 C.F.R. § 25.158.

<sup>72</sup> See Amendment of the Commission's Regulatory Policies to Allow Non-U.S. Licensed Satellites Providing Domestic and International Service in the United States, *Report and Order*, 12 FCC Rcd 24094, 24098 ¶ 7 (1997).

<sup>73</sup> Amendment of the Commission's Regulatory Policies to Allow Non-U.S. Licensed Space Stations to Provide Domestic and International Service in the United States, *Report and Order*, IB Docket No. 96-111, 12 FCC Rcd 24094, 24175 at ¶ 190 (1997) (*DISCO II* or *DISCO II Order*). *DISCO II* specifically said that foreign DBS operators seeking access to the United States must file the same information as U.S. applicants under Section 100.13, but that rule has since been eliminated as DBS applications are now filed in accordance with the general Part 25 satellite rules. See *Part 100 Order*, 17 FCC Rcd 11349 at ¶¶ 35-36.

<sup>74</sup> Typically, foreign satellite operators file requests for U.S. market access in the form of a letter of intent or Petition for Declaratory Ruling or earth station application (if the foreign space station is already in operation).

<sup>75</sup> See 47 C.F.R. § 25.114. The analyses required under Section 25.114(d)(13) must take into account both the Appendix 30 BSS Plans and the Appendix 30A feeder link Plans. *Id.*

<sup>76</sup> See Spectrum Five Petitions, SES AMERICOM PDR, and EchoStar 86.5° W.L. Application.

25. If, however, we decide that it is more appropriate to treat all DBS satellites in the 12.2-12.7 GHz service bands outside the scope of the *Space Station Reform Order*, we seek comment on what processing framework we should use for licensing these satellites. We specifically seek comment on whether, pursuant to Section 309(j) of the Communications Act,<sup>77</sup> a competitive bidding system, or auction, could be designed to assign mutually exclusive license applications for all DBS satellites in the 12.2-12.7 GHz service bands in the United States. In this regard, we note that the U.S. Court of Appeals' decision in the *Northpoint*, case<sup>78</sup> found the Commission's July 2004 auction of DBS licenses was unauthorized in light of Section 647 of the ORBIT Act,<sup>79</sup> which prohibits the Commission from using competitive bidding to assign orbital locations or spectrum used "for the provision of international or global satellite communications services."<sup>80</sup> We seek comment on whether the Commission could conduct an auction for all DBS satellites in the 12.2-12.7 GHz service bands consistent with the *Northpoint* ruling and, if so, how such an auction would be implemented. We also seek comment on what, if any, limitations ITU procedures<sup>81</sup> may place on a Commission auction. Further, if future legislative action authorizes the Commission to award DBS licenses in the 12.2-12.7 GHz service bands via competitive bidding, we request comment on how we could structure the auction. Commenters should specify whether, and the extent to which, such an auction would be different from one conducted without such legislation.

26. *Safeguards against Speculation.* Our first-come, first-served approach for processing space station applications contains several safeguards to ensure that licensees remain committed and able to proceed with system implementation in a timely manner. Our rules require all GSO-like applicants awarded a license under this procedure to post a \$3 million performance bond with the Commission within 30 days of license grant. They also require licensees to construct and launch the satellite consistent with a specified milestone schedule.<sup>82</sup> If the licensee fails to meet an implementation milestone, the license becomes null and void and the bond is executed.<sup>83</sup> The rules also limit applicants to a total of five pending applications and licenses for unbuilt satellites in a specific frequency band at any one time.<sup>84</sup> If we adopt a first-come, first-served processing procedure for DBS satellites, we propose to apply these accompanying safeguards, including applying the standard milestone schedule in Section 25.164 of the Commission's rules (which includes completion of critical design review within two years of license

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<sup>77</sup> 47 U.S.C. § 309(j).

<sup>78</sup> See *Northpoint Technology, Ltd. and Compass Systems, Inc. v. Federal Communications Commission*, 412 F.3d 145 (D.C. Cir. 2005) (*Northpoint v. FCC*).

<sup>79</sup> Open-Market Reorganization for the Betterment of International Telecommunications Act, Pub. L. No. 106-180, 114 Stat. 48 (2000), *as amended*, Pub. L. No. 107-233, 116 Stat. 1480 (2002), *as amended*, Pub. L. No. 108-228, 118 Stat. 644 (2004), *as amended*, Pub. L. No. 108-371, 118 Stat. 1752 (2004). The ORBIT Act amended the Satellite Communications Act of 1962, 47 U.S.C. § 701 *et seq.* (Satellite Act), and is *codified at* 47 U.S.C. § 761 *et seq.* Section 647 of the ORBIT Act states that "[n]otwithstanding any other provision of law, the Commission shall not have the authority to assign by competitive bidding orbital locations or spectrum used for the provision of international or global satellite communications services. The President shall oppose in the International Telecommunication Union and in other bilateral and multilateral for a any assignment by competitive bidding of orbital locations or spectrum used for the provision of such services." See 47 U.S.C. § 765(f).

<sup>80</sup> *Id.*

<sup>81</sup> For example, the ITU first in time filing policy applies to the 12.2-12.7 GHz service. Thus, a country filing first at the ITU obtains superior international coordination rights at that orbital location. See ITU Appendices 30 and 30A.

<sup>82</sup> 47 C.F.R. § 25.164. Under this milestone schedule, one year after grant, the grantee must enter into a binding, non-contingent construction contract; at two years, complete critical design review; at three years begin construction of the first satellite; at five years, launch and operate the satellite.

<sup>83</sup> 47 C.F.R. § 25.165.

<sup>84</sup> 47 C.F.R. § 25.159.

grant) to DBS systems, in lieu of the due diligence milestones set forth in Section § 25.148(b).<sup>85</sup> We request comment on these proposals. Additionally, we seek comment on whether there are any public interest rationales for imposing a higher performance bond and/or whether we should impose tighter limits on the number of pending applications and licenses that applicants for DBS systems may have for unbuilt satellites at any one time.

27. *Annual Reporting Requirement.* Most space station operators, both GSO and NGSO, other than DBS operators, are subject to annual reporting requirements. These reports must include, among other things, the status of space station construction and anticipated launch dates.<sup>86</sup> We believe that these reports help to keep us apprised of whether DBS operators are taking all necessary action to meet their milestones. A reporting requirement would also put DBS operators on equal regulatory footing with other satellite operators that must file annual reports, including FSS operators providing direct-to-home services. We seek comment on whether DBS licensees and foreign DBS operators that are authorized to access the United States should be required to submit similar annual reports regardless of the licensing mechanism we ultimately adopt in this proceeding.

## **B. Technical Rules for the Operation of Reduced Spacing DBS Satellites**

28. The majority of the comments received in response to the *DBS Reduced Spacing Public Notice* oppose a rulemaking proceeding for establishing specific rules to accommodate requests for provision of DBS service from reduced orbital locations, and instead favor use of existing ITU procedures to accommodate such filings. Commenters such as New Skies Satellites N.V., SES AMERICOM, OfCom, and EchoStar argue that ITU procedures already exist to accommodate reduced spacing for DBS satellites, and that Commission rules already account for these procedures.<sup>87</sup> These commenters argue that consequently no need for a rulemaking exists.<sup>88</sup> Those commenters who support the DIRECTV petition argue that new rules are necessary to protect existing DBS services and to preserve the capability of existing DBS systems to grow.<sup>89</sup> EchoStar also argues that DIRECTV's reasoning was flawed when it calculates that an aggregate C/I of 21 dB is consistent with a single-entry value of 24 dB. EchoStar points out that, in the presence of an earth station pointing error towards the first interfering satellite, if a second interfering satellite is added on the opposite side of the first at the same nominal spacing, the aggregate interference will be less than doubled because of the greater isolation from the second satellite because

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<sup>85</sup> Under the existing DBS due diligence milestones, authorization holders must complete contracting for all system satellites within one year of grant; complete construction of the first satellite in the system within four years of grant; and all satellites in the system must be in operation within six years of grant. *See* 47 C.F.R. § 25.148(b).

<sup>86</sup> *See, e.g.*, 47 C.F.R. §§ 25.143(e) (reporting requirements for 1.6/2.4 GHz mobile-satellite service (MSS) and 2 GHz MSS); 25.144(c) (reporting requirements for satellite digital audio radio service (SDARS)); 25.145(f) (reporting requirements for fixed-satellite service in the 20/30 GHz bands); 25.10(l) (reporting requirements for FSS in the 4/6 GHz band). Other elements of the annual reports include a listing of non-scheduled transponder outages that last more than 30 minutes and identification of transponders not available for service or not performing to specifications. *See id.*

<sup>87</sup> We note that EchoStar has more recently stated to the Commission that upon further study, "4.5° spacing between U.S. DBS satellites raises certain technical difficulties, especially for 'multiple feed' earth station dishes (i.e. those designed to receive programming feeds from more than one satellite at the same time)." Letter from Pantelis Michalopoulos, Counsel for EchoStar Satellite, L.L.C., to Marlene H. Dortch, Secretary, FCC (dated March 25, 2005).

<sup>88</sup> New Skies Comments, EchoStar Comments, SES AMERICOM Comments, U.K. Office of Communications (OfCom) Comments, generally.

<sup>89</sup> *See, e.g.*, Boeing Comments at 2; DIRECTV Comments at 4-5; State of Hawaii Comments at 5-6; Rainbow Reply Comments at 3-5.

the earth station pointing error is away from it.<sup>90</sup> Pegasus suggests a phased approach in order to accommodate non-nine-degree spaced DBS satellites. Under this approach, the power flux density (PFD) of the new satellites would be restricted until such time as all the existing DBS satellites had been replaced with newer satellites with “relatively uniform technical constraints.”<sup>91</sup> Pegasus proposes use of the ITU process to expedite the licensing of non-nine-degree spaced DBS satellites, but suggests in the technical appendix to its comments that emission limitations should be effected through new rules.<sup>92</sup>

29. As previously noted, we believe that current Commission rules can accommodate the filing of DBS applications that specify operations at locations other than the eight orbital slots assigned to the United States in the ITU Region 2 Plan (as specified in Appendices 30 and 30A of the ITU Radio Regulations). Nevertheless, we seek comment whether new technical DBS rules for processing applications are necessary. The Commission’s Part 25 rules refer to and incorporate provisions of the ITU Radio Regulations for purposes of analyzing applications for DBS with technical parameters that differ from those in the Region 2 Plan. Specifically, Section 25.114(d)(13)(i) requires that for satellites in the DBS service, applicants must submit a “sufficient technical showing that the proposed system could operate satisfactorily if all assignments in the BSS and feeder link Plans were implemented.”<sup>93</sup> This showing is intended to demonstrate that the proposed system will meet its performance objectives given the Region 2 Plan assignments. Section 25.114(d)(13)(ii) requires “[a]nalyse of the proposed systems with respect to the limits in Annex 1 to Appendices 30 and 30A” of the International Telecommunication Union (ITU) Radio Regulations.<sup>94</sup> This showing is intended to demonstrate how the proposed system will affect operating DBS systems and those systems that are subject to pending Region 2 modification proposals. Section 25.148(f) requires that “DBS operations must be in accordance with the sharing criteria and technical characteristics contained in Appendices 30 and 30A of the ITU Radio Regulations. Operation of systems using differing technical characteristics may be permitted, with adequate technical showing, and if a request has been made to the ITU to modify the appropriate Plans to include the system’s technical parameters.”<sup>95</sup> Further, as noted previously, the *Part 100 Report and Order* contemplated reduced spacings.<sup>96</sup> Thus, if an applicant can coordinate its proposal with other U.S. DBS operators and secure agreement with other operators already having assignments in the Region 2 Plans or with prior requests for Plan modifications, we believe our rules allow us to consider these applications without establishing technical/operational rules. However, we recognize that the DBS agreement seeking process can be complex, and therefore we seek comment below on methods to facilitate the coordination process should we decline to establish new technical rules.

30. DIRECTV has suggested that the Commission address “preservation of the technical flexibility” of operating nine-degree-spaced DBS systems “to continue to grow and innovate” in an effort to compete with cable systems and roll out delivery of local broadcast signals and HDTV programming.<sup>97</sup>

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<sup>90</sup> See Application of EchoStar for Authority to Construct, Launch, and Operate a Direct Broadcast Satellite in the 12.2-12.7 GHz and 17.3-17.8 GHz Frequency Bands at the 86.5° W.L. Orbital Location, *Amendment*, IBFS File No. SAT-LOA-20030609-00113 (filed February 27, 2004) Appendix 1 to Supplemental Technical Annex at A1-11 through A1-13.

<sup>91</sup> Pegasus Comments at 4.

<sup>92</sup> Pegasus Comments at 6 and A-3.

<sup>93</sup> 25 C.F.R. § 25.114(d)(13)(i).

<sup>94</sup> 25 C.F.R. § 25.114(d)(13)(ii).

<sup>95</sup> 47 C.F.R. § 25.148(f). Section 25.111(c) provides additional guidance regarding the filing of plan modifications at the ITU. In particular, this rule indicates what U.S. applicants and licensees must provide to the Commission so that it may file plan modifications on the licensee’s/applicant’s behalf. See 47 C.F.R. § 25.111(c).

<sup>96</sup> See *supra* para. 3.

<sup>97</sup> DIRECTV Comments at 5.



Rainbow DBS commented that “in framing any technical rules for new, short-spaced DBS satellites, the Commission should be cognizant of the potential risk to existing services that were deployed in reasonable reliance on a continuing nine-degree spacing environment.”<sup>98</sup> Rainbow DBS says that the Commission should be mindful of “(i) protecting existing consumer DBS earth stations, and (ii) allowing for the implementation of enhanced DBS services by existing providers.”<sup>99</sup>

31. In its *DBS Reduced Spacing Public Notice* comments, DIRECTV suggested that reduced-spacing DBS satellites may not be a matter of urgency because a number of other capacity options are available for the provision of DTH to U.S. consumers.<sup>100</sup> In particular, DIRECTV points out that “there is an abundance of FSS Ku and Ka band capacity that could be used to provide direct-to-home. . . video and broadband services, as well as the prospect of future BSS capacity. . . in the 17 GHz band. . . .”<sup>101</sup> We agree that existing and potential DBS operators have other options at their disposal to expand their service.<sup>102</sup> Reduced spacing DBS would provide existing and potential DBS operators with another valuable option with which they can expand their service offerings. We seek comment on whether existing Plan modification processes are sufficient to allow room for expansion of existing DBS service.

### C. Resolution of Impasse in Operator Negotiations and Protection Margins

32. *Background.* ITU procedures address requests to provide DBS service into the United States from reduced-spacing orbital locations (which by definition constitute a modification of the ITU Region 2 Plans) where such operations could potentially interfere with frequency assignments operated in accordance with the Region 2 Plans. The specific procedures governing Plan modifications are set forth in Appendices 30 and 30A of the ITU Radio Regulations. These procedures also apply to satellites operating at locations in the ITU Region 2 Plan, but with parameters different from those contained in the Plan. In that case, the country proposing the non-conforming satellite must request a Plan modification.

33. Section 4.2 of Article 4 of Appendices 30 and 30A of the ITU Radio Regulations stipulates the modification procedures for the Region 2 Plans. Administrations start the process by filing the information required by Appendix 4 of the Radio Regulations. For U.S. Plan modifications, the Appendix 4 information is prepared by the satellite operators and submitted to the Commission, which reviews the information and forwards it to the International Telecommunication Union’s Radiocommunication Bureau (ITU/BR). The Appendix 4 information includes such BSS satellite parameters as antenna beam footprint, transmitted power, modulation techniques, earth station antenna characteristics (including typical subscriber terminal characteristics), and satellite orbital location.

34. Similar to DIRECTV’s recommended protection criterion, the ITU’s approach to interference assessment in the context of the BSS Plans is based on C/I levels. The overall equivalent protection margin (OEPM) for a particular channel at a particular test point within a particular beam of a

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<sup>98</sup> Rainbow Reply at 3.

<sup>99</sup> *Id.* at 3.

<sup>100</sup> DIRECTV Comments at 3.

<sup>101</sup> DIRECTV Comments at 3.

<sup>102</sup> We note, for example, that EchoStar is currently leasing FSS capacity from SES in order to use FSS DTH to augment its DBS capacity. See e.g. <http://www.lyngsat.com/amc2.html> (visited on May 10, 2005), showing that all 24 Ku-band transponders on the CONUS beam of the AMC-2 satellite are carrying EchoStar programming. See also, Redesignation of the 17.7-19.7 GHz Frequency Band, Blanket Licensing of Satellite Earth Stations in the 17.7-20.2 GHz and 27.5-30.0 GHz Frequency Bands, and the Allocation of Additional Spectrum in the 17.3-17.8 GHz and 24.75-25.25 GHz Frequency Bands for Broadcast Satellite-Service Use, *Report and Order*, 15 FCC Rcd 13430 (2000) (allocating the 17.3-17.7 GHz band to the BSS, taking effect on April 1, 2007).

particular satellite network is the basic measure used by the ITU.<sup>103</sup> OEPM includes the aggregate effect of the interference levels from the uplink and downlink co-channel signals from every other satellite network in the Plan on a desired carrier operating on a particular channel referenced to a particular test point.<sup>104</sup> It also includes the aggregate effect on the desired carrier of the interference levels from the signals of the upper and lower nearest and next-nearest adjacent channels of every other satellite network in the Plan, or pending addition to the Plan. The OEPM is defined as 0.0 dB when the aggregate C/I from all the other networks in the Plan or pending is 28 dB. Thus, for example, if the OEPM for a particular channel and test point was -8 dB, then the aggregate C/I from all the other networks would be 20 dB. The list of OEPMs for all the channels and test points of all the beams of a particular satellite network defines the “reference situation” for that network. In order to assess whether a proposed modification would affect other assignments in the Region 2 Plans, the ITU/BR evaluates the impact on the reference situation, that exists at the time the proposed modification is evaluated, of all current and pending assignments in the Region 2 Plans, using the criteria in Section 2 of Annex 1 of Appendices 30 and 30A.

35. When a Plan modification request is submitted to the ITU, the ITU calculates the effect of the proposed new network on the OEPMs of all the networks already in the Plans and pending modification to the Plans. According to Annex 1 of Appendices 30 and 30A, if the effect of the proposed network is to reduce the OEPM of any channel and test point of any network in the plan or pending plan modification below -0.25 dB, or if already negative, by 0.25 dB or more, that network is considered to be “affected” and the new network can only be added to the plan with the agreement of all the administrations whose networks are affected.<sup>105</sup> Additional technical examinations determine whether other services (terrestrial, non-planned BSS and fixed-satellite services) and the appropriate Regions 1 and 3 Plan and List assignments that share the same frequency band are affected using the criteria in Sections 3, 4, 6 and 7 of Annex 1 of Appendix 30 and Section 5 of Annex 1 of Appendix 30A.

36. If all affected administrations reach agreement, the Administration proposing the new or modified assignment may continue with the appropriate procedure under Article 5 of Appendix 30, which specifies the procedures for notification, examination, and recording of frequency assignments to space stations in the broadcast-satellite service, and Article 5 of Appendix 30A, which specifies the procedures for coordination, notification, examination, and recording in the International Frequency Register of frequency assignments to feeder link transmitting earth stations and receiving space stations in the fixed-satellite service. In cases where the administrations cannot reach an agreement, provisions in paragraphs 4.2.20 to 4.2.21D of Article 4 of Appendices 30 and 30A allow the assignment to be provisionally included in the Region 2 Plan on a non-interference basis. Once the Article 4 procedure is completed, the modification is added to the Plan and the reference situation is updated.<sup>106</sup>

37. We note that the U.S. role in the ITU process is different in cases involving applications for U.S. DBS licenses than it is in cases involving Petitions for Declaratory Ruling to serve the U.S. DBS market from non-U.S. satellites. In the second case, the Commission is only involved as a potentially-affected Administration and does not submit any filings to the ITU on behalf of the petitioner. Those filings are submitted by the Administration granting the petitioner the authority to launch and operate the satellite.

38. In contrast, the Commission has the responsibility to submit Plan modification requests to

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<sup>103</sup> A test point is a geographic location on the Earth’s surface that is within the beam.

<sup>104</sup> Carrier-to-interference ratio is a measure at a reference point-- typically, the input to the receiver-- of the amount of power in the wanted signal, the “carrier” (C), compared to the amount of power in the interfering signal (I).

<sup>105</sup> See Annex 1 of Appendices 30 and 30A of the ITU Radio Regulations.

<sup>106</sup> For more information regarding ITU procedures, see <http://www.itu.int/ITU-R/conferences/seminars/geneva-2004/docs/10-Plans.doc> (visited on January 13, 2006).

the ITU on behalf of applicants seeking U.S. licenses to launch and operate DBS satellites with characteristics that differ from those in the Plan. Since the ITU does not consider domestic licensing issues in its process for determining affected administrations, the ITU assumes that the interference levels between systems subject to U.S. Plan modification requests and other U.S. networks already in the Plan, or with prior pending modification requests, are acceptable to the U.S. administration. In other words, the ITU assumes that if the United States requests a modification to the Plan to implement a U.S.-licensed reduced-spacing satellite, the U.S. administration has determined that no other U.S. DBS networks (including those proposed in previous modification requests) will be adversely affected by the new DBS network.<sup>107</sup>

39. Because of this assumption, the Commission will not submit Plan modification requests to the ITU until the domestic interference-resolution process is complete. If the proposed system's technical characteristics differ from those in the Appendix 30 and 30A Plans, our rules require submission of a "... sufficient technical showing that the system could operate satisfactorily if all the assignments in the BSS and feeder link Plans were implemented."<sup>108</sup> The analyses must consider all pending Plan modification requests received by the ITU prior to the submission of the new request, including all prior U.S. DBS networks. The Commission also requires applicants to submit analyses with respect to the limits relative to change in OEPM in Annex 1 to Appendices 30 and 30A.<sup>109</sup>

40. *Discussion.* We foresee three possible scenarios in which interference issues could be presented with respect to an application seeking to provide DBS service from an orbital location spaced less than nine-degrees from an existing DBS space station or seeking to provide DBS service from a "nine-degree" location with parameters different from those contained in the Plan (including requests from foreign satellite operators to access the United States from such a satellite), namely:

- i) the applicant has negotiated an operating arrangement with the other potentially-affected U.S. DBS service providers,
- ii) the applicant has demonstrated that the proposed DBS system would not affect the systems of other U.S. DBS service providers as defined by the ITU in Annex 1 of Appendix 30 and 30A, and has not negotiated operating arrangements, or
- iii) the applicant has conducted interference analyses, the results of which the applicant considers should be acceptable to other U.S. DBS service providers, but one or more of the U.S. DBS service providers disagree.

41. In the first two scenarios, the Commission could proceed with public notice and review, and, taking any comments into account, could take action on the application. In the third scenario, the Commission could also proceed with public notice and review, although it could not take action on the application until agreements are reached. Furthermore, if the application is for a U.S.-licensed space station, the Commission will not submit it to the ITU until agreement has been reached with affected U.S. operators. In the case of such a coordination impasse, the Commission could take one of several approaches.

42. The simplest approach would be to set a deadline for reaching agreement and to dismiss the application when the deadline expires if no agreement has been reached. We seek comment on

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<sup>107</sup> See Implementation of ITU Cost Recovery Charges for Satellite Network Filings, *Public Notice*, 16 FCC Rcd 18732 (Int'l Bureau 2001). The Commission requires the applicant, licensee, or other entity associated with an ITU filing to certify that it unconditionally accepts all cost recovery responsibilities.

<sup>108</sup> See 47 C.F.R. § 25.114(d)(13)(i).

<sup>109</sup> See 47 C.F.R. § 25.114(d)(13)(ii).

whether this should be the preferred approach and, if so, what would be the appropriate time period to allow for additional negotiations before dismissing the application.

43. Another approach would be to grant or dismiss the application depending on the acceptability of the interference as evaluated by the Commission. We seek comment of whether this should be the preferred approach and, if so, what criteria the Commission should use in evaluating what constitutes “acceptable” interference.

44. The DIRECTV Petition suggests certain levels of C/I and certain other technical parameters an applicant should use in designing its system.<sup>110</sup> DIRECTV proposes single-entry C/I levels of 24 dB for “acceptable” interference into an existing system and 12 dB from the existing system into the new system. While this is an approach that operators may take in negotiating operating arrangements, we do not believe that such asymmetries, which would lead to dictating two different classes of service in our rules, are appropriate for regulatory enforcement.

45. We could use the ITU’s approach in resolving cases of disagreement between the applicant and the licensees concerning the acceptability of interference. However, the calculations are difficult and complex and the acceptable C/I levels depend on the reference situation such that, the higher the interference level initially, the higher the acceptable level of interference would be.<sup>111</sup>

46. Another benchmark we can use when coordination negotiations reach an impasse is system “unavailability.” This DBS performance criterion is meaningful to the consumer, as it is the amount of time each year that the consumer’s DBS receiver is not providing video and audio signals to the consumer’s television display and sound system. When the total time that signals are available during some time period is divided by the length of the time period, the resulting metric is known as “availability.” This metric is usually expressed in percentage terms. The complementary metric, the total time that signals are *not* available in some time period, divided by the length of the time period, is called “unavailability,” or “outage.” Mathematically, unavailability is equal to 100% - availability, when availability is expressed in terms of a percentage. The ITU Region 2 BSS Plan was based on a target of 99.7% availability, which corresponds to an outage of about 26.3 hours per year.<sup>112</sup> This target is usually exceeded by the domestic DBS operators, who typically aim for at least 99.9% availability for their systems, except in the high-precipitation and fringe coverage areas.

47. In the *NGSO-FSS/MVDDS First R&O*, the Commission adopted criteria to protect DBS systems from interference from non-geostationary orbit fixed-satellite (NGSO-FSS) systems.<sup>113</sup> These

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<sup>110</sup> Petition of DIRECTV Enterprises, LLC for a Rulemaking on the Feasibility of Reduced Orbital Spacing in the U.S. Direct Broadcast Satellite Service (filed September 5, 2003) (DIRECTV Petition).

<sup>111</sup> As discussed above, the ITU considers a network to be “affected” by a proposed Plan modification if it were to experience a change in OEPM of more than 0.25 dB. In order to reduce the OEPM by less than 0.25 dB, the single entry C/I needs to be at least 12.25 dB higher than the aggregate C/I implicit in the reference situation. Thus, for example, if the reference OEPM were -10 dB (aggregate reference C/I = 18 dB), the single entry C/I from the new network would have to be at least 30.25 dB in order to maintain the OEPM within 0.25 dB of the reference situation. By way of comparison, a single entry C/I level of 24 dB would reduce the OEPM by about 1.0 dB in this example. Indeed, a single entry C/I of 24 dB would reduce by more than 0.25 dB any OEPM higher than -17.25 dB (aggregate reference C/I = 11.75 dB).

<sup>112</sup> 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; Amendment of the Commission's Rules to Authorize Subsidiary Terrestrial Use of the 12.2-12.7 GHz Band by Direct Broadcast Satellite Licensees and Their Affiliates; and Applications of Broadwave USA, PDC Broadband Corporation, and Satellite Receivers, Ltd. to Provide A Fixed Service in the 12.2-12.7 GHz Band, *First Report and Order and Further Notice of Proposed Rulemaking*, 16 FCC Rcd 4096, 4177 at ¶ 214 (2000) (*NGSO-FSS/MVDDS First R&O*).

<sup>113</sup> *NGSO-FSS/MVDDS First R&O*, 16 FCC Rcd. 4096, 4162 at ¶ 170.

interference protection criteria took the form of equivalent power flux density (EPFD) limits. These limits were based on a goal of limiting the increase in the unavailability of DBS systems due to interference from the NGSO-FSS systems to 10%, without interference from the MVDDS systems.<sup>114</sup> In the *NGSO-FSS/MVDDS Second R&O*,<sup>115</sup> the Commission adopted EPFD limits for Multichannel Video Distribution and Data Service (MVDDS) systems, again based on a goal of limiting the increase in unavailability of DBS systems to 10% over the unavailability that the DBS systems would experience without interference from the MVDDS systems.<sup>116</sup> This increase in unavailability is in addition to the 10% increase in unavailability that is allocated to NGSO-FSS systems.<sup>117</sup> The Commission noted that the typical service availability of DBS systems is on the order of 99.8 to 99.9%, corresponding to a level of unavailability of 0.1 to 0.2%.<sup>118</sup> The Commission stated that a 10% increase in unavailability is insubstantial and does not approach a level that could be considered harmful interference.<sup>119</sup> The Commission also noted that the increase in unavailability might be below or above the 10% nominal level in different parts of the country.<sup>120</sup>

48. The unavailability of a digital radiocommunication system, such as a DBS system, is dependent on the ratio of the carrier power (C) of the desired signal to the sum of the powers of the thermal noise and interference (N + I) at the receiver. The received carrier power of microwave signals, such as DBS signals, is reduced by precipitation in the path between the DBS satellite and the subscriber's receiver.<sup>121</sup> The thermal noise seen by the receiver is also increased by precipitation. The resulting reduction in C/N ratio in the presence of precipitation is commonly known as a "rain fade." The intensity of the rain in the path between the satellite and the subscriber's receiver is the determining factor in how much the C/N ratio will be reduced. Therefore, the precipitation statistics at each specific DBS receiver location will influence the average carrier-to-noise-plus-interference ratio (C/(N+I)) experienced at that location, and hence the average unavailability at that location.<sup>122</sup> The Commission took this into account in the *NGSO-FSS/MVDDS Second R&O*, in which it recognized that a single EPFD limit for all areas of the country was inappropriate, due to the differing precipitation-induced propagation

<sup>114</sup> *Id.*, 16 FCC Rcd 4096, 4164 at ¶ 177.

<sup>115</sup> 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; Amendment of the Commission's Rules to Authorize Subsidiary Terrestrial Use of the 12.2-12.7 GHz Band by Direct Broadcast Satellite Licensees and Their Affiliates; and Applications of Broadwave USA, PDC Broadband Corporation, and Satellite Receivers, Ltd. to Provide A Fixed Service in the 12.2-12.7 GHz Band, *Memorandum Opinion and Order and Second Report and Order*, 17 FCC Rcd 9614 (2002) (*NGSO-FSS/MVDDS Second R&O*).

<sup>116</sup> *Id.*, 17 FCC Rcd 9614, 9642 at ¶ 71.

<sup>117</sup> *Id.*, 17 FCC Rcd 9614, 9641 at ¶ 68.

<sup>118</sup> *Id.*, 17 FCC Rcd 9614, 9640-41 at ¶ 67. For example, a level of unavailability of 0.1% corresponds to a total outage time of about 526 minutes over the course of a year. An increase in unavailability of 10% thus corresponds to an increase in outage time of about an additional 53 minutes over the course of a year.

<sup>119</sup> *Id.*, 17 FCC Rcd 9614, 9643 at ¶ 72.

<sup>120</sup> *Id.* On July 15, 2005, the United States Court of Appeals for the D.C. Circuit denied a petition for review filed by a number of DBS providers that challenged the Commission's decision to allow MVDDS to share the 12.2-12.7 GHz band with DBS. *Northpoint Technology, Ltd. v. FCC*, 414 F.3d 61 (D.C. Cir. 2005) (finding that the Commission had a rational basis for concluding that MVDDS could share the 12 GHz band without causing harmful interference to DBS).

<sup>121</sup> If the interfering signal seen by a DBS receiver is from another DBS satellite, the power of the interfering signal will probably be reduced as well, but most likely by a different amount than the power of the desired signal.

<sup>122</sup> See Methodologies for determining the availability performance for digital multiprogramme broadcasting-satellite service systems, and their associated feeder links operating in the planned bands, Recommendation ITU-R BO.1696 (2005).

degradations in different geographic regions. The Commission therefore adopted four different EPFD limits for four different geographic regions of the contiguous United States, based on the statistics describing the precipitation characteristics of these regions.<sup>123</sup>

49. Given the Commission's previous use of increase in unavailability as an indirect DBS metric, we seek comment on whether we could use a limit on the percentage of increase in unavailability in various cities distributed around the United States as the criterion for acceptability of the interference caused by reduced spacing satellites, as evaluated by the Commission. Alternatively, we seek comment as to whether we could use regional EPFD limits, similar to what the Commission established in the *NGSO-FSS/MVDDS Second R&O*. We note that we are not revisiting the unavailability criteria previously adopted as they pertain to MVDDS and NGSO-FSS systems.

50. We seek comment on whether there is a single symmetric interference criterion that the Commission could use to make findings of acceptability of interference to existing DBS systems and, if there is, what that criterion should be. If such a criterion exists, we seek comment on what would be the appropriate calculation methodology to determine the value of this criterion for a particular coordination, and what would be the appropriate values for any parameters, such as antenna mispointing angle, antenna pattern mask, and DBS receiver threshold  $C/(N+I)$  level to existing DBS systems, that the Commission should use in its calculations.

#### **D. License Term**

51. *Background.* Under our rules, the license term for all space stations, except licenses for DBS space stations, is 15 years.<sup>124</sup> DBS space stations licensed as broadcast facilities have eight-year license terms, and those DBS space stations not licensed as broadcast facilities have ten-year license terms.<sup>125</sup> The eight-year term for DBS space stations licensed as broadcast facilities is consistent with the eight-year license term for television and radio broadcast stations.<sup>126</sup> The eight-year term for broadcast stations is established by statute.<sup>127</sup> In 1995, we extended the term of non-broadcast DBS licenses<sup>128</sup> from five to ten years, the maximum then allowed by the Communications Act, and "which better reflect[ed] the useful life of a DBS satellite."<sup>129</sup>

52. *Discussion.* We propose to continue the ten year non-broadcast DBS license term, and we seek comment on this proposal.<sup>130</sup>

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<sup>123</sup> *NGSO-FSS/MVDDS Second R&O*, 17 FCC Rcd. 9614, 9641 at ¶ 68.

<sup>124</sup> See 47 C.F.R. § 25.121.

<sup>125</sup> See 47 C.F.R. § 25.121.

<sup>126</sup> See 47 C.F.R. § 73.1020.

<sup>127</sup> See 47 U.S.C. § 307(c)(1) ("Each license granted for the operation of a broadcasting station shall be for a term of not to exceed 8 years.")

<sup>128</sup> A DBS provider offering a subscription service is not considered to be a broadcast licensee. See *Subscription Video, Report and Order*, 1 FCC Rcd 1001, 1005-06 (1987).

<sup>129</sup> Revision of Rules and Policies for the Direct Broadcast Satellite Service, *Report and Order*, 11 FCC Rcd 9712 at ¶¶ 129-30 (1995).

<sup>130</sup> Licensees for Reduced Spacing DBS satellites will, of course, be subject to geographic service requirements imposed by 47 C.F.R. § 25.148(c) and public interest obligations imposed by 47 C.F.R. § 25.701.

### E. Effect of Reduced Spacing DBS Satellites on Multichannel Video Distribution and Data Service

53. *Background.* In the *NGSO-FSS Ku-Band R&O & FNPRM*, the Commission permitted MVDDS transmissions in the Fixed Service in the 12.2-12.7 GHz Band.<sup>131</sup> We noted above that the Commission concluded that MVDDS could be introduced into the 12.2-12.7 GHz band without causing harmful interference to DBS.<sup>132</sup> MVDDS licensees must ensure that the EPFD from their systems is below the values listed in Section 101.105(a)(4)(ii) of the Commission's rules<sup>133</sup> at the receivers of all DBS customers who had their DBS receive antennas installed prior to or within 30 days after the date the MVDDS licensee notifies the DBS licensee(s) of its intent to install an MVDDS transmitter site.<sup>134</sup> DBS licensees are responsible for mitigating MVDDS interference to DBS receivers installed more than 30 days after the date the MVDDS licensee notifies the DBS licensee(s) of its intent to install an MVDDS transmitter site.<sup>135</sup>

54. *Discussion.* We propose that MVDDS protection of DBS (and DBS protection of MVDDS) under Part 101.1440 applies to less-than-nine-degree-spaced DBS satellites. We request comment on whether there is a need to revisit these rules as a result of authorization of additional U.S. services in the future at orbital locations that are not currently assigned to the United States in the Region 2 BSS plan. We believe that all DBS service in the 12.2-12.7 GHz band should be subject to the same regulatory treatment.

### F. Non-Geostationary Satellite Orbit Fixed Satellite Services

55. *Background.* The Commission has said that “receive earth station antenna sidelobe performance will affect the amount of interference into DBS receivers from other systems, including non-geostationary satellite orbit (NGSO) FSS systems.”<sup>136</sup> The ITU-R has examined the issue of interference into BSS receivers from NGSO FSS systems in great depth.<sup>137</sup> Following extensive work in the ITU-R Study Groups, WRC-2000 adopted equivalent power flux density downlink (EPFD<sub>down</sub>) limits<sup>138</sup> to

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<sup>131</sup> 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; Amendment of the Commission's Rules to Authorize Subsidiary Terrestrial Use of the 12.2-12.7 GHz Band by Direct Broadcast Satellite Licensees and Their Affiliates; and Applications of Broadwave USA, PDC Broadband Corporation, and Satellite Receivers, Ltd. To Provide a Fixed Service in the 12.2-12.7 GHz Band, *Report and Order and Further Notice of Proposed Rulemaking*, 16 FCC Rcd 4096, 4177 at ¶ 213 (2000) (*NGSO-FSS Ku-Band R&O & FNPRM*).

<sup>132</sup> *Id.*

<sup>133</sup> 47 C.F.R. § 101.105(a)(4)(ii).

<sup>134</sup> *See* 47 C.F.R. § 101.1440.

<sup>135</sup> *See* 47 C.F.R. § 101.1440(e).

<sup>136</sup> *Part 100 Order*, 17 FCC Rcd at 11390-91, ¶ 128.

<sup>137</sup> *See e.g.*, Protection of the BSS in the 12 GHz band and associated feeder links in the 17 GHz band from interference caused by non-GSO FSS systems, Rec. ITU-R BO.1444 (2000); Equivalent power flux-density limits, EPFD., to protect the broadcasting-satellite service in the 12 GHz band from interference caused by non-geostationary fixed-satellite service systems, Rec. ITU-R BO.1517 (2001).

<sup>138</sup> The equivalent power flux-density (EPFD) is defined as the sum of the power flux-densities produced at a geostationary-satellite system receive station on the Earth's surface or in the geostationary satellite orbit, as appropriate, by all the transmit stations within a non-geostationary-satellite system, taking into account the off-axis discrimination of a reference receiving antenna assumed to be pointing in its nominal direction. *See* Final Acts of WRC-2000, Article 22, 22.5C.1.

protect BSS receive antennas from NGSO FSS system interference.<sup>139</sup> The Commission adopted these same EPFD<sub>down</sub> limits as a domestic requirement in 2000.<sup>140</sup> These EPFD<sub>down</sub> limits are calculated on the basis of the reference antenna patterns contained in Annex 1 to Recommendation ITU-R BO.1443.<sup>141</sup> The rules do not limit DBS networks to operating only with receive antennas conforming to the specific performance patterns contained in the referenced ITU-R Recommendation.<sup>142</sup> While the choice of receive antenna characteristics remains with the DBS operator, the operator must accept any resulting interference from a NGSO-FSS network that is operating within the permitted EPFD<sub>down</sub> values.<sup>143</sup> Thus, the DBS operator cannot claim protection from any interference it might receive beyond the level that would be received by a DBS earth station conforming to the referenced antenna patterns.<sup>144</sup>

56. WRC-97 adopted an allocation for NGSO FSS in the BSS bands at 12 GHz. This includes the 12.2 - 12.7 GHz band in Region 2.<sup>145</sup> Resolution 532 (WRC-97) established provisional power flux density (PFD) limits to protect GSO BSS systems from NGSO-FSS systems.<sup>146</sup> WRC-2000 adopted single-entry PFD limits for NGSO-FSS systems in Article 22 of the ITU Radio Regulations,<sup>147</sup> and aggregate PFD limits in Resolution 76 (WRC-2000).<sup>148</sup> These PFD limits were based on the criteria that NGSO-FSS systems contribute no more than 10% to the time allowance of unavailability of BSS systems, and never cause a complete interruption of the reception of the video picture by a BSS receiver.<sup>149</sup>

57. In the *NGSO FSS Ku-Band R&O & FNPRM*, the Commission adopted limits on EPFD from NGSO-FSS satellites to protect GSO FSS and DBS systems.<sup>150</sup> Single-entry EPFD limits from Table 22-1D of Article 22 of the ITU Radio Regulations have been incorporated into Section 25.208(l) of our rules.<sup>151</sup> Aggregate EPFD limits contained in ITU Resolution 76 (WRC-2000) Table 1D have been

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<sup>139</sup> See Final Acts of WRC-2000, Article 22, Table S22-1D.

<sup>140</sup> See, generally, 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; Amendment of the Commission's Rules to Authorize Subsidiary Terrestrial Use of the 12.2-12.7 GHz Band by Direct Broadcast Satellite Licensees and Their Affiliates; and Applications of Broadwave USA, PDC Broadband Corporation, and Satellite Receivers, Ltd. to Provide A Fixed Service in the 12.2-12.7 GHz Band, *First Report and Order and Further Notice of Proposed Rule Making*, 16 FCC Rcd 4096, 4162-73 at ¶¶ 170-204 (2000) (*NGSO-FSS Ku-Band R&O & FNPRM*).

<sup>141</sup> See Final Acts of WRC-2000, Article 22, No. S22.5C.11.

<sup>142</sup> The recommended antenna patterns are used as a reference standard for calculating permitted EPFD<sub>down</sub> values from NGSO FSS systems. The DBS operator must use a receive antenna that can sufficiently reject NGSO FSS interference in this environment. However, any number of antenna patterns can accomplish this result. *NGSO-FSS Ku-Band R&O & FNPRM*, 16 FCC Rcd 4096, 4168 at ¶ 187.

<sup>143</sup> *NGSO-FSS Ku-Band R&O & FNPRM*, 16 FCC Rcd 4096, 4162-73 at ¶¶ 170-204.

<sup>144</sup> *Part 100 Order*, 17 FCC Rcd at 11390-91, ¶ 128.

<sup>145</sup> See Final Acts of WRC-97, Geneva, 1997, Footnote S5.487A.

<sup>146</sup> See Final Acts of WRC-97, Geneva, 1997.

<sup>147</sup> See Article 22, No. 22.5C and Tables 22-1A through 22.1E of the ITU Radio Regulations.

<sup>148</sup> See Resolution 76 of the ITU Radio Regulations.

<sup>149</sup> See Recommendation ITU-R BO.1444, Protection of the BSS in the 12 GHz band and associated feeder links in the 17 GHz band from interference caused by non-GSO FSS systems, at *recommends* 1.1 and 1.2.

<sup>150</sup> *NGSO-FSS Ku-Band R&O & FNPRM*, 16 FCC Rcd. 4096, 4162 at ¶ 170.

<sup>151</sup> 47 C.F.R. § 25.208(l).



incorporated into Section 25.208(m) of our rules.<sup>152</sup>

58. *Discussion.* The Commission's rules apply footnote 5.487A of the International Radio Regulations to the frequency band 12.2-12.7 GHz in the U.S. domestic allocation.<sup>153</sup> Thus, we tentatively conclude that since we intend to treat reduced spacing DBS space stations the same as Region 2 Plan DBS space stations, reduced spacing DBS satellites need not consider interference into NGSO/FSS systems, and NGSO/FSS systems must protect any non-nine-degree-spaced DBS satellite that is a part of the Region 2 Plan. We request comment on whether the Commission's rules are adequate to accommodate new DBS systems relative to NGSO/FSS sharing, and whether there is a need to revise our rules to account for non-nine-degree-spaced DBS satellites.

### G. Mobile DBS Receivers

59. *Background.* Various parties filing comments on the *DBS Reduced Spacing Public Notice* urged the Commission to consider protection of mobile DBS receivers in this proceeding. In an *ex parte* filing, KVH Industries (KVH) stated that the Commission "has recognized that mobile applications fall within the definition of DBS service, and that such applications are, just like stationary applications, worthy of interference protection. Indeed, the FCC has even considered whether additional measures are necessary to protect mobile receivers."<sup>154</sup> KVH, a manufacturer of small DBS receive antennas for use on boats and vehicles, notes that it has "designed its advanced mobile antenna systems to operate in this [nine degree orbital spacing] environment."<sup>155</sup> KVH argues that the "introduction of [reduced spacing] DBS satellites would increase interference to the point where there would be no link margin remaining and service to thousands of deployed antennas would be interrupted, at least occasionally if not, permanently."<sup>156</sup>

60. In its comments in response to the *DBS Spacing Public Notice*, Boeing noted that the "Commission concluded in 1998 that aeronautical DBS service is not a secondary service, but is 'consistent with the allocation because the DBS definition in the Commission's Rules does not limit transmissions to fixed receive earth stations.'"<sup>157</sup> Boeing argues that aeronautical DBS therefore is entitled to the same protection as other DBS services.<sup>158</sup> Boeing has conducted its own interference analysis of the proposals that have been presented to the Commission to launch and operate DBS satellites with 4.5° orbital spacing.<sup>159</sup> Boeing argues that its analysis "clearly indicates that short-spaced DBS satellites operating without technical restraints are likely to disrupt the reception of Connexion's [Boeing's aeronautical DBS brand] DBS services."<sup>160</sup> Boeing further states that "DBS service is routinely received by aircraft using tail mounted and fuselage mounted antennas. Due to size, weight and

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<sup>152</sup> 47 C.F.R. § 25.208(m).

<sup>153</sup> See 47 C.F.R. § 2.106, Footnote 5.487A (providing, in part, that "Non-geostationary-satellite systems in the fixed-satellite service shall not claim protection from geostationary-satellite networks in the broadcasting-satellite service operating in accordance with the Radio Regulations. . .").

<sup>154</sup> See Letter from Martin Kits van Heyningen, President, KVH Industries LLC, to Marlene Dortch, Secretary, FCC, dated September 21, 2004 (KVH Industries Comments) (citing *NGSO-FSS Ku-Band R&O & FNPRM*, 16 FCC Rcd 4096, 4173 at ¶ 202).

<sup>155</sup> KVH Comments at 2.

<sup>156</sup> KVH Comments at 4.

<sup>157</sup> Boeing Comments at 4-5(citing *NGSO-FSS Ku-Band R&O & FNPRM*, 16 FCC Rcd at 4173 ¶ 202).

<sup>158</sup> Boeing Comments at 5.

<sup>159</sup> See Boeing Comments at 5 and Engineering Analysis Appendix.

<sup>160</sup> See Boeing Comments at 5. Boeing states that "the increased interference would result in a negative link budget margin to Connexion's aeronautical receive antennas that would prevent customer reception." *Id.*

aerodynamic factors, the largest antenna that can be accommodated on board aircraft for this purpose is 30 centimeters. . . reducing the orbital spacing of the spacecraft to 4.5 degrees could cause interference to stations using these antennas and significantly degrade performance to the stations.”<sup>161</sup>

61. *Discussion.* The Commission concluded in the *NGSO-FSS Order* that it was not necessary to adopt any additional measures to protect DBS service to aircraft.<sup>162</sup> We also note that the original Region 2 Plan was based on 1.0-meter-diameter subscriber antennas. The current ITU Radio Regulations require that the gain, beam width, co-polar radiation pattern, cross-polar radiation pattern, and antenna diameter in meters be supplied as part of the information filed in accordance with Appendix 4 of the ITU Radio Regulations for a new Region 2 Plan modification. In their filings requesting modifications to the Region 2 Plan, DBS applicants and licensees have specified subscriber antenna diameters as small as 45 cm, but no smaller. Consequently, the smallest antenna diameter that must be considered in the international agreement-seeking process for U.S. Region 2 Plan modification requests is currently 45 cm. Thus, DBS receiving antennas smaller than 45 cm in diameter are not protected under the ITU Radio Regulations or the Commission's rules. We request comment on whether Commission rules can or should accommodate smaller antennas in order to facilitate DBS service to mobile receivers. If we rely on the ITU process for protection of mobile antennas, and decide not to adopt new rules for their protection, we seek comment on whether mobile antenna manufacturers' earth station licenses should be conditioned to require disclosure to customers that their mobile equipment is not protected from interference.

#### H. Full-CONUS Spectrum Cap

62. *Background.* In 2002, the Commission determined that it would allow DBS licenses to acquire additional satellite capacity in order to better compete with cable systems, because cable operators are investing in fiber optic cable and converting to digital technologies which will enable them to expand their channel capacity and program offerings.<sup>163</sup> In its comments on the *DBS Spacing Public Notice*, Pegasus urged the Commission to establish “a spectrum cap that effectively limits the licensing of new orbital locations to new entrants and then only to those who have not entered into essentially exclusive arrangements with the only two existing operators with systems capable of providing full-CONUS service.”<sup>164</sup> EchoStar and DIRECTV replied that a DBS spectrum cap is unwarranted, and that any such cap would be harmful to DBS providers in the competitive MVPD marketplace.<sup>165</sup>

63. *Discussion.* As the Commission observed in 2002, DBS offers a strong competitive alternative to cable systems, and we have not found any competitive problems with allowing a DBS operator to operate in more than one full-CONUS orbital position.<sup>166</sup> Indeed, allowing such operation may enable DBS operators to better compete with cable systems in the future. As recently as 2004, the

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<sup>161</sup> *Id* at 7.

<sup>162</sup> *NGSO-FSS Ku-Band R&O & FNPRM*, 16 FCC Rcd at 4173 ¶ 204.

<sup>163</sup> *Part 100 Order*, 17 FCC Rcd at 11398 ¶ 144.

<sup>164</sup> Pegasus Comments at 1-2.

<sup>165</sup> EchoStar reply at 6-7, DIRECTV reply at 19-21.

<sup>166</sup> *Part 100 Order*, 17 FCC Rcd 11331, 11389 ¶ 144. [But see, *Auction of Direct Broadcast Satellite Licenses, Order*, 19 FCC Rcd 23849 (2004) (*Eligibility Order*) (where the Commission found that the channels to be auctioned at 61.5° W.L. could be important to increasing the number of options and choices available to subscribers of DBS or MVPD services and limited the eligibility by prohibiting “firms currently operating satellites at orbit locations capable of providing DBS service to the 50 U.S. states . . . from acquiring, owning, or controlling” the licenses for the two channels at the 61.5° W.L. orbital location for a period of four years after the award of the initial license. 19 FCC Rcd at 23874, para. 54. EchoStar has requested reconsideration of this decision. (See EchoStar Satellite LLC Petition for Reconsideration, in Auctions Docket AUC-03-52 (filed May 20, 2005)).

Commission declined to adopt any eligibility restrictions based on spectrum usage for the three DBS licenses available in Auction No. 52.<sup>167</sup> We request comment on whether a spectrum cap on the number of full-CONUS orbital locations that one satellite company can control is now necessary in light of the rule changes proposed in this notice of proposed rulemaking.

#### IV. CONCLUSION

64. For the reasons discussed above, we invite comment on revising the processing procedures for DBS applications. Parties opposing the proposed approaches should explain their reasons for opposition with particularity, recommending alternatives or explaining in detail why they believe the proposed approaches are unnecessary. Interested parties are also invited to recommend alternative license processing procedures. Based on our experience with space station processing over the past several years' with comparable first-come, first-served procedures, we believe the proposed approaches will similarly expedite the provision of new DBS service to the public.

#### V. PROCEDURAL MATTERS

##### A. Ex Parte Presentations

65. This proceeding shall be treated as a "permit-but-disclose" proceeding in accordance with the Commission's ex parte rules.<sup>168</sup> Persons making oral ex parte presentations are reminded that memoranda summarizing the presentations must contain summaries of the substance of the presentations and not merely a listing of the subjects discussed. More than a one or two sentence description of the views and arguments presented is generally required.<sup>169</sup> Other rules pertaining to oral and written presentations are set forth in Section 1.1206(b) of the Commission's rules as well.

##### B. Initial Regulatory Flexibility Certification

66. Pursuant to the Regulatory Flexibility Act (RFA),<sup>170</sup> the Commission has prepared an Initial Regulatory Flexibility Certification of the possible significant economic impact on small entities by the policies and actions considered in this *Notice*. The text of the Certification is set forth in Appendix B. Written public comments are requested on this Certification. Comments must be identified as responses to the RFA Certification, and must be filed by the deadlines for comments on the *Notice* as provided in the caption, above. The Commission will send a copy of the *Notice*, including the Certification, to the Chief Counsel for Advocacy of the Small Business Administration.<sup>171</sup>

##### C. Initial Paperwork Reduction Act of 1995 Analysis

67. *Paperwork Reduction Act*. This NPRM contains proposed new and modified information collection(s). The Commission, as part of its continuing effort to reduce paperwork burdens, invites the general public and the Office of Management and Budget (OMB) to comment on the information collection(s) contained in this NPRM, as required by the Paperwork Reduction Act of 1995, Public Law

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<sup>167</sup> 2004 DBS Auction Order, 19 FCC Rcd 820, 833 at ¶ 24.

<sup>168</sup> 47 C.F.R. §§ 1.1200, 1.1206; Amendment of 47 C.F.R. § 1.1200 et seq. Concerning Ex Parte Presentations in Commission Proceedings, GC Docket No. 95-21, *Report and Order*, 12 FCC Rcd 7348 (1997).

<sup>169</sup> 47 C.F.R. § 1.1206(b)(2).

<sup>170</sup> See 5 U.S.C. § 603. The RFA, see U.S.C. §601 et seq., has been amended by the Contract with America Advancement Act of 1996, Pub. L. No. 104-121, 110 Stat. 847 (1996) (CWAAA). Title II of the CWAAA is the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA).

<sup>171</sup> 5 U.S.C. § 603(a).

No. 104-13. Public and agency comments are due 60 days from date of publication of the NPRM in the Federal Register. Comments should address: (a) whether the proposed collection of information is necessary for the proper performance of the functions of the Commission, including whether the information shall have practical utility; (b) the accuracy of the Commission's burden estimates; (c) ways to enhance the quality, utility, and clarity of the information collected; and (d) ways to minimize the burden of the collection of information on the respondents, including the use of automated collection techniques or other forms of information technology. In addition, pursuant to the Small Business Paperwork Relief Act of 2002, Public Law No. 107-198, *see* 44 U.S.C. § 3506(c)(4), we seek specific comment on how we might "further reduce the information collection burden for small business concerns with fewer than 25 employees."

#### **D. Comment Filing Procedures**

68. Pursuant to Sections 1.415 and 1.419 of the Commission's rules, 47 C.F.R. §§ 1.415, 1.419, interested parties may file comments in response to this Notice no later than on or before 75 days after Federal Register publication. Reply comments to these comments may be filed no later than on or before 105 days after Federal Register publication. All pleadings are to reference IB Docket No. 06-160. Comments may be filed using the Commission's Electronic Comment Filing System (ECFS) or by filing paper copies. Parties are strongly encouraged to file electronically. See Electronic Filing of Documents in Rulemaking Proceedings, 63 Fed. Reg. 24,121 (1998).

69. Comments filed through the ECFS can be sent as an electronic file via the Internet to <http://www.fcc.gov/e-file/ecfs.html>. Parties should transmit one copy of their comments to the docket in the caption of this rulemaking. In completing the transmittal screen, commenters should include their full name, U.S. Postal Service mailing address, and the applicable docket or rulemaking number. Parties may also submit an electronic comment by Internet e-mail. To get filing instructions for e-mail comments, commenters should send an e-mail to [ecfs@fcc.gov](mailto:ecfs@fcc.gov) and should include the following words in the body of the message, "get form <your e-mail address>." A sample form and directions will be sent in reply.

70. Parties choosing to file by paper must file an original and four copies of each filing in IB Docket No. 06-160. Filings can be sent by hand or messenger delivery, by commercial overnight courier, or by first-class or overnight U.S. Postal Service mail (although we continue to experience delays in receiving U.S. Postal Service mail). If more than one docket or rulemaking number appears in the caption of this proceeding, commenters must submit two additional copies for each additional docket or rulemaking number. The Commission's mail contractor, Vistrionix, Inc. will receive hand-delivered or messenger-delivered paper filings for the Commission's Secretary at 236 Massachusetts Avenue, N.E., Suite 110, Washington, D.C. 20002. The filing hours at this location are 8:00 a.m. to 7:00p.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 mail, Express Mail, and Priority Mail should be addressed to 445 12<sup>th</sup> Street, S.W., Washington, D.C. 20554. All filings must be addressed to the Commission's Secretary, Office of the Secretary, Federal Communications Commission.

71. Comments submitted on diskette should be on a 3.5 inch diskette formatted in an IBM-compatible format using Word for Windows or compatible software. The diskette should be clearly labeled with the commenter's name, proceeding (including the docket number, in this case, IB Docket No. 06-160), type of pleading (comment or reply comment), date of submission, and the name of the electronic file on the diskette. The label should also include the following phrase "Disk Copy - Not an Original." Each diskette should contain only one party's pleadings, preferably in a single electronic file.

72. All parties must file one copy of each pleading electronically or by paper to each of the following: (1) The Commission's duplicating contractor, Best Copy and Printing, Inc., 445 12th Street,

S.W., Room CY-B402, Washington, D.C. 20554, telephone (202) 488-5300, facsimile (202) 488-5563, or via e-mail at [FCC@BCPIWEB.COM](mailto:FCC@BCPIWEB.COM). (2) Arthur Lechtman, Attorney, Satellite Division, International Bureau, 445 12<sup>th</sup> Street, S.W., Washington, D.C. 20554; e-mail [Arthur.Lechtman@fcc.gov](mailto:Arthur.Lechtman@fcc.gov). (3) Mark Young, Attorney, Satellite Division, International Bureau, 445 12<sup>th</sup> Street, S.W., Washington, D.C. 20554; e-mail [Mark.Young@fcc.gov](mailto:Mark.Young@fcc.gov).

73. Comments and reply comments and any other filed documents in this matter may be obtained from Best Copy and Printing, Inc., in person at 445 12th Street, S.W., Room CY-B402, Washington, D.C. 20554, via telephone at (202) 488-5300, via facsimile (202) 488-5563, or via e-mail at [FCC@BCPIWEB.COM](mailto:FCC@BCPIWEB.COM). The pleadings will be also available for public inspection and copying during regular business hours in the FCC Reference Information Center, Room CY-A257, 445 Twelfth Street, S.W., Washington, D.C. 20554 and through the Commission's Electronic Filing System (ECFS) accessible on the Commission's World Wide Website, [www.fcc.gov](http://www.fcc.gov).

74. Comments and reply comments must include a short and concise summary of the substantive arguments raised in the pleading. Comments and reply comments must also comply with Section 1.49 and all other applicable sections of the Commission's rules.<sup>172</sup> All parties are encouraged to utilize a table of contents, and to include the name of the filing party and the date of the filing on each page of their submission. We also strongly encourage that parties track the organization set forth in this Notice in order to facilitate our internal review process.

75. Commenters who file information that they believe is proprietary may request confidential treatment pursuant to Section 0.459 of the Commission's rules. Commenters should file both their original comments for which they request confidentiality and redacted comments, along with their request for confidential treatment. Commenters should not file proprietary information electronically. *See Examination of Current Policy Concerning the Treatment of Confidential Information Submitted to the Commission, Report and Order*, 13 FCC Rcd 24816 (1998), *Order on Reconsideration*, 14 FCC Rcd 20128 (1999). Even if the Commission grants confidential treatment, information that does not fall within a specific exemption pursuant to the Freedom of Information Act (FOIA) must be publicly disclosed pursuant to an appropriate request. *See* 47 C.F.R. § 0.461; 5 U.S.C. § 552. We note that the Commission may grant requests for confidential treatment either conditionally or unconditionally.

76. As such, we note that the Commission has the discretion to release information on public interest grounds that does fall within the scope of a FOIA exemption.

#### **E. Further Information**

77. For further information regarding this proceeding, contact Arthur Lechtman, Attorney, Mark Young, Attorney, or Chip Fleming, Engineer, Satellite Division, International Bureau at (202) 418-0719. Information regarding this proceeding and others may also be found on the Commission's website at [www.fcc.gov](http://www.fcc.gov).

#### **VI. ORDERING CLAUSES**

78. Accordingly, IT IS ORDERED that, pursuant to the authority contained in sections 4(i), 303(r), and 309(j) of the Communications Act of 1934, as amended, 47 U.S.C. §§ 154(i), 303(r), and 309(j), this *Notice of Proposed Rulemaking* IS ADOPTED.

79. IT IS FURTHER ORDERED that the Commission's Consumer and Governmental Affairs Bureau, Reference Information Center shall send a copy of this *Notice Of Proposed Rulemaking*, including the initial regulatory flexibility certification, to the Chief Counsel for Advocacy of the Small

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<sup>172</sup> 47 C.F.R. § 1.49.

Business Administration, in accordance with Section 603(a) of the Regulatory Flexibility Act, 5 U.S.C. § 601, et seq. (1981).

FEDERAL COMMUNICATIONS COMMISSION

Marlene H. Dortch  
Secretary

## APPENDIX A

Comments on Proposals to Permit Reduced Orbital Spacings Between U.S. Direct Broadcast Satellites,  
Report No. SPB-196, *Public Notice*, 18 FCC Rcd 25683 (2003)

### Comments:

1. Bell ExpressVu LP (“Bell ExpressVu”)
2. DIRECTV, Inc. (“DIRECTV”)
3. EchoStar Satellite L.L.C. (“EchoStar”)
4. Gibraltar Regulatory Authority
5. Government of Bermuda, Ministry of Tourism, Telecommunications & E-Commerce
6. New Skies Satellites N.V. (“New Skies”)
7. Pegasus Development Corporation (“Pegasus”)
8. Sand Video, Inc.
9. SES Americom, Inc. (“SES Americom”)
10. Telesat Canada (“Telesat”)
11. The Boeing Company (“Boeing”)
12. The Office of Communications, United Kingdom (“Ofcom”)
13. The State of Hawaii

### Reply Comments:

1. DIRECTV
2. EchoStar
3. Loral SpaceCom Corporation and Loral Space & Communications Ltd. (“Loral”)
4. New Skies
5. Rainbow DBS Company LLC (“Rainbow”)
6. SES Americom
7. Telesat

### Ex Parte Comments:

1. New Skies (March 4, 2004)
2. SES Americom (March 25, 2004)
3. SES Americom (March 31, 2004)
4. SES Americom (April 1, 2004)
5. Government of Bermuda, Department of Telecommunications (April 21, 2004)
6. SES Americom (April 22, 2004)
7. SES Americom (April 27, 2004)
8. SES Americom (June 15, 2004)
9. DIRECTV (July 23, 2004)
10. SES Americom (Aug. 18, 2004)
11. The DIRECTV Group, Inc. (Sept. 9, 2004)
12. The DIRECTV Group, Inc. (Sept. 9, 2004)
13. KVH Industries, Inc. (Sept. 21, 2004)
14. The DIRECTV Group, Inc. (Sept. 23, 2004)
15. SES Americom (Oct. 1, 2004)
16. EchoStar (March 25, 2005)
17. DIRECTV (May 24, 2006)
18. DIRECTV (May 25, 2006) (three ex parte meetings reported)

19. SES Americom (May 26, 2006)
20. EchoStar (Aug. 7, 2006)
21. DIRECTV (Aug. 8, 2006)



## APPENDIX B

### Initial Regulatory Flexibility Certification

The Regulatory Flexibility Act of 1980, as amended (RFA),<sup>173</sup> requires that a regulatory flexibility analysis be prepared for notice-and-comment rule making proceedings, unless the agency certifies that “the rule will not, if promulgated, have a significant economic impact on a substantial number of small entities.”<sup>174</sup> The RFA generally defines the term “small entity” as having the same meaning as the terms “small business,” “small organization,” and “small governmental jurisdiction.”<sup>175</sup> In addition, the term “small business” has the same meaning as the term “small business concern” under the Small Business Act.<sup>176</sup> A “small business concern” is one which: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the Small Business Administration (SBA).<sup>177</sup>

The rules proposed in this Notice of Proposed Rulemaking, if adopted, would affect applicants for the Direct Broadcast Satellite Service (DBS). The rules proposed in this Notice of Proposed Rulemaking apply only to entities providing DBS. Because DBS provides subscription services, DBS falls within the SBA-recognized definitions of “Cable and Other Program Distribution”<sup>178</sup> or “Satellite Telecommunications”<sup>179</sup>. These definitions provide that small entities are ones with \$12.5 million or less in annual receipts. Small businesses of that size (*i.e.*, \$12.5 million or less in annual receipts) will not have the financial ability to become DBS system operators because of the high implementation costs, including construction of satellite space stations and the rocket launch process, associated with satellite systems and services.<sup>180</sup>

The Commission therefore certifies, pursuant to the RFA, that the proposals in this Notice of Proposed Rulemaking, if adopted, will not have a significant economic impact on a substantial number of small entities because all entities affected are large. The Commission will send a copy of the Notice of Proposed Rulemaking, including a copy of this Initial Regulatory Flexibility Certification, to the Chief

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<sup>173</sup> The RFA, *see* 5 U.S.C. § 601 – 612, has been amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), Pub. L. No. 104-121, Title II, 110 Stat. 857 (1996).

<sup>174</sup> 5 U.S.C. § 605(b).

<sup>175</sup> 5 U.S.C. § 601(6).

<sup>176</sup> 5 U.S.C. § 601(3) (incorporating by reference the definition of “small-business concern” in the Small Business Act, 15 U.S.C. § 632). Pursuant to 5 U.S.C. § 601(3), the statutory definition of a small business applies “unless an agency, after consultation with the Office of Advocacy of the Small Business Administration and after opportunity for public comment, establishes one or more definitions of such term which are appropriate to the activities of the agency and publishes such definition(s) in the Federal Register.”

<sup>177</sup> 15 U.S.C. § 632.

<sup>178</sup> 13 C.F.R. § 121.201, North American Industry Classification Systems (NAICS) code 517510.

<sup>179</sup> 13 C.F.R. § 121.201, North American Industry Classification Systems (NAICS) code 517410.

<sup>180</sup> *See, e.g.*, Final Analysis Communication Services, Inc., *Order and Authorization*, 13 FCC Rcd. 6618, 6644 (1998) (non-geostationary satellite applicant estimated that “cost of construction, launch and first-year operating costs for two satellites was approximately \$6.22 million”). *See, generally*, Rainbow DBS Company LLC, Assignor and Echostar Satellite L.L.C., Assignee, Consolidated Application for Consent to Assignment of Space Station and Earth, *Memorandum Opinion and Order*, FCC 05-177 (rel. Oct. 12, 2005) (difficulty and cost of establishing additional DBS operator).

Counsel for Advocacy of the SBA.<sup>181</sup> This initial certification will also be published in the Federal Register.<sup>182</sup>

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<sup>181</sup> 5 U.S.C. § 605(b).

<sup>182</sup> 5 U.S.C. § 605(b).

**JOINT STATEMENT OF COMMISSIONERS  
MICHAEL J. COPPS AND JONATHAN S. ADELSTEIN  
APPROVING IN PART AND CONCURRING IN PART**

*Re: Amendment of the Commission's Policies and Rules for Processing Applications in the Direct Broadcast Satellite Service; Feasibility of Reduced Orbital Spacing for Provision of Direct Broadcast Satellite Service in the United States (Notice of Proposed Rulemaking, IB Docket No. 06-160, Report No. SPB-196)*

Today the Commission seeks comment on how to deal with proposals to launch so-called 'tweener satellites which would operate in the orbital spaces between existing DBS satellites. This is an important and complex question, and we are glad the Commission approaches it through a comprehensive rulemaking process. As the record before the Commission indicates, the views of satellite operators about the technical feasibility of 'tweeners are currently in a state of flux. Indeed, though the two providers of retail DBS service in the United States initially disagreed about the advisability of permitting 'tweeners, both now believe that the approach raises significant interference concerns.

We concur in part, however, because of that portion of the item that states the Commission "may" grant pending 'tweener applications before completing this rulemaking. That strikes us as putting the cart in front of the horse. We believe the better course would be to refrain from approving any applications until the Commission can develop a comprehensive framework for these matters. Such an approach would ensure that the millions of current DBS subscribers are not subject to any potential for interruptions to their service.