

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

In the Matter of)
)
Amendment of the Commission’s Policies and) IB Docket No. 06-160
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)

Reply Comments of ManSat Ltd

ManSat Ltd (“ManSat”) responds to the Comments submitted on the Commission’s Notice of Proposed Rulemaking regarding ways to accommodate additional DBS systems through reduced orbital spacing.¹ In short, ManSat endorses the consensus views of the other commenters that the adoption of interference criteria could provide the basis on which the Commission may allow entry by new DBS systems, even where the new entrant has been unable to reach a coordination agreement with an incumbent. ManSat also supports extending the DBS license term to 15 years.

A. Adoption of Objective Interference Criteria Is Warranted

Consensus exists among the commenters that, if the Commission is to facilitate entry by new DBS systems in situations in which the new entrant has not been able to reach an agreement with an incumbent provider, the Commission should establish objective interference criteria to achieve that goal.² Adoption of such criteria would ensure that all affected DBS

¹ *Amendment of the Commission’s Policies and Rules for Processing Applications in the DBS Service Feasibility of Reduced Orbital Spacing for Provision of DBS Service in the United States*, FCC 06-120 (rel. Aug 18, 2006) (“*NPRM*”).

² The Government of Bermuda did not address this issue in its Comments.

operators have an incentive to coordinate in a timely and constructive manner. As SES Americom has indicated, the two fundamental elements of such interference criteria should be (i) a minimum C/I ratio, and (ii) a maximum increase in the unavailability of the incumbent's system. DIRECTV, EchoStar and SES Americom all support the concept of identifying a certain minimum C/I ratio.³ Each of DIRECTV, SES Americom and Spectrum Five supports adopting unavailability criteria, although Spectrum Five supports using unavailability as the sole interference criterion.⁴

ManSat strongly supports SES Americom's proposal, which incorporates both of these fundamental elements, with a 19 dB minimum C/I ratio serving as the initial basis for allowing new entry absent a coordination agreement, and, failing that, allowing a maximum 10% increase in the unavailability of the incumbent's system.⁵ As noted by SES Americom and Spectrum Five, a 10%-increase-in-unavailability criterion is fully consistent with Commission precedent, which establishes that "a 10% increase in unavailability is insubstantial and does not approach a level that could be considered harmful interference."⁶ Furthermore, such a tiered

³ See DIRECTV Comments at 29-30; EchoStar Comments at 10-11; SES Americom Comments at 18.

⁴ See DIRECTV Comments at 17; SES Americom Comments at 18; Spectrum Five Comments at 4-7.

⁵ SES Americom Comments at 18. SES Americom also proposes a third criterion of absolute, rather than relative, unavailability, which merits consideration by the Commission: failing the first and second criteria, new entry would be allowed if it did not cause an incumbent's total unavailability to fall below 99.90%, thus accounting for situations in which an incumbent's unavailability is very low, such that a *relative* increase in unavailability of more than 10% might still produce an insignificant *absolute* increase in unavailability. *Id.*

⁶ *NPRM, FCC 06-120 at 20-21, ¶ 47 (citing Amendment of Parts 2 and 25 of the Commission's Rules to Permit Operation of NGSO FSS Systems Co-Frequency with GSO and Terrestrial Systems in the Ku-Band Frequency, 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*

approach would be better-suited to application across a wide range of real-world coordination scenarios than would a C/I criterion alone.⁷ To be practically implementable, of course, any increase-in-unavailability criterion should be based on objective measures of the impact on an existing DBS system. ManSat offers the following suggestions about the implementation of such interference criteria.

First, the C/I ratio should apply equally to all operators. DIRECTV had previously proposed asymmetrical C/I criteria—24 dB to protect incumbents from new entrants but only 12 dB to protect new entrants from incumbents—and it still argues for that same result today.⁸ However, as Spectrum Five notes, the NPRM unequivocally rejected proposals for adopting nonreciprocal C/I ratios, saying that doing so “would lead to dictating two different classes of service” and would therefore be undesirable as a policy matter.⁹ There is no reason to revisit that conclusion.

Second, any minimum C/I ratio should be based on the minimum antenna size possible that would allow for *practical* operation of new DBS systems through reduced spacing. Given the overall trend in the industry toward larger DBS receive antennas,¹⁰ the Commission

Band, 17 FCC Rcd 9614, 9643, ¶ 72 (2002); *see also* SES Americom Comments at 19; Spectrum Five Comments at 5-6.

⁷ As SES Americom notes, the use of satellite clusters by U.S. DBS providers can make coordination measurements extremely complicated, so the use of a C/I criterion may not be appropriate in all situations. SES Americom Comments at 18. Thus, although Spectrum Five’s single-criterion proposal may appear simpler on its face than SES Americom’s three-tiered proposal, the latter may in fact better achieve the goal of facilitating new DBS systems while also providing reasonable protection for incumbents.

⁸ *See Petition of DIRECTV Enterprises, LLC for a Rulemaking on the Feasibility of Reduced Orbital Spacing in the U.S. Direct Broadcast Service*, RM-10804 (filed Sept. 5, 2003).

⁹ *NPRM*, FCC 06-120 at 20, ¶ 44; *see also* Spectrum Five Comments at 7.

¹⁰ For example, today’s 5 LNB DIRECTV antenna is approximately 76 cm (30”) wide, compared to DIRECTV’s original antennas, which were approximately 45 cm (18”) wide. *See, e.g.*, “DirecTV 5 Beam LNB Dish,” available at <<http://www.htmarket.com/at9.html>>.

should follow the suggestion made by SES Americom and afford interference protection to *new entrants* for antennas at least 52 cm in diameter—or, in the case of smaller antennas, the same degree of protection applicable to that minimum antenna size.¹¹

Third, just as the Commission allowed for a reasonable transition period when it moved to reduced, two-degree spacing for FSS satellites,¹² the Commission should allow incumbent DBS operators a reasonable transition period before being subject to the new protection criteria based on minimum antenna size requirements. This period would allow incumbent operators to complete their currently-ongoing transition from first generation (45 cm) antennas, and would also address DIRECTV's claim that symmetrical interference protections would actually produce asymmetrical services because incumbent providers will be disadvantaged by their legacy technology base.¹³ Every inefficiency of its current technology cited by DIRECTV as a justification for asymmetrical C/I limits is, in fact, an opportunity for the incumbent operators to make better use of their existing spectrum assignments than they do today (*e.g.*, by adopting MPEG-4 compression)—even taking into account some degree of increased interference protection that may be necessitated by the introduction of new DBS systems. Incumbents will make these upgrades anyway; the only question is *when*. A reasonable transition period of, for example, 3-5 years from the adoption of rules in this proceeding would give incumbent operators ample time to catch up with technological progress, especially considering the significant customer churn rate in the DBS industry.¹⁴ Thus, SES

¹¹ SES Americom Comments at 16.

¹² See *2-Degree Spacing Order*, FCC 83-184, ¶¶ 41-43 (rel. Aug. 16, 1983) (allowing for spacing of up to 3° during the transition to 2° spacing in the 4/6 GHz band).

¹³ DIRECTV Comments at 11-12.

¹⁴ The churn rate in the DBS industry is still over 20% annually. See, *e.g.*, *EchoStar Communications Corporation*, SEC Form 10-Q (filed Nov. 7, 2006) at 36, available at

Americom's proposal would benefit consumers by facilitating both the deployment of additional DBS capacity by new entrants and the rapid adoption of cutting-edge technology by incumbents.

B. The DBS License Term Should Be Extended to Fifteen Years

ManSat joins EchoStar and Bermuda in supporting the Commission's proposal to extend the DBS license term from ten to fifteen years.¹⁵ As EchoStar notes, "the useful life of modern DBS satellites typically exceeds 10 years and is comparable to the useful lives of modern FSS satellites."¹⁶ Thus, extending the DBS license term to fifteen years "better reflects the useful life of a DBS satellite"—precisely as the Commission explained when, eleven years ago, it extended the term of the DBS license from five to ten years.¹⁷ This also would be consistent with the Commission's recent extension of FSS license terms from ten to fifteen years.¹⁸

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<<http://ccbn.10kwizard.com/xml/download.php?repo=tenk&ipage=4469892&format=PDF>>
(citing an average monthly churn rate of 1.76% for the three months ending September 30, 2006).

¹⁵ *NPRM*, FCC 06-120 at 22, ¶¶ 51-52; *see* EchoStar Comments at 15; Bermuda Comments at 3.

¹⁶ EchoStar Comments at 15.

¹⁷ *Revision of Rules and Policies for the Direct Broadcast Satellite Service*, 11 FCC Rcd 9712, 9762, ¶ 129 (1995).

¹⁸ *See Licensing Reform Order*, 8 FCC Rcd 10760, 10860-61, ¶ 266 (2003).