

**BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

In the Matter of)
)
The Establishment of Policies and Service Rules)
For the Broadcasting Satellite Service at the)
17.3-17.7 GHz Frequency Band and at the)
17.7-17.8 GHz Frequency Band Internationally,) IB Docket No. 06-123
and at the 24.75-25.25 GHz Frequency Band for)
Fixed Satellite Services Providing Feeder Links to)
the Broadcasting-Satellite Service and for the)
Broadcasting-Satellite Service Operating)
Bi-directionally in the 17.3-17.7 GHz Frequency)
Band)

COMMENTS OF AT&T

AT&T Services, Inc., on behalf of its subsidiaries and affiliates, including DIRECTV (collectively, “AT&T”), submits the following comments in response to the International Bureau’s Public Notice¹ seeking comments on proposed ground path interference rules for 17/24 Reverse Band Broadcast-Satellite Service operations as presented in the Report and Order and Further Notice of Proposed Rulemaking in IB Docket No. 06-123.²

¹ Public Notice, *Commission Staff Invites any Supplemental Information or Comments on Proposed Ground Path Interference Rules for 17/24 GHz Reverse Band Broadcast-Satellite Service (BSS) Operations*, IB Docket No. 06-123, released October 7, 2015.

² See *Establishment of Policies and Service Rules for the Broadcasting-Satellite Service at the 17.3-17.7 GHz Frequency Band and at the 17.7-17.8 GHz Frequency Band Internationally, and at the 24.75- 25.25 GHz Frequency Band for Fixed Satellite Services Providing Feeder Links to the Broadcasting-Satellite Service and for the Satellite Services Operating Bi-directionally in the 17.3-17.8 GHz Frequency Band*, Report and Order and Further Notice of Proposed Rulemaking, IB Docket No. 06-123, 22 FCC Rcd 8842 (2007) (*Report and Order and FNPRM*).

In 2007, the Commission released its *Report and Order* adopting processing and service rules for the 17/24 GHz Broadcasting-Satellite Service (BSS) to enable delivery of BSS satellite services to the public.³ At the same time, it issued the *FNPRM* seeking further comment on technical issues related to potential interference unique to the “reverse band” operating environment, including the ground path interference that can occur when the signals from transmitting DBS feeder link earth stations operating in the 17.3-17.7 GHz band are detected at the receiving earth stations of 17/24 GHz BSS subscribers. AT&T’s DIRECTV affiliate previously filed both Comments⁴ and Reply Comments⁵ in response to the *FNPRM*. The only other parties commenting on the ground path interference proposals raised in the *FNPRM* were SES Americom, Inc., and EchoStar Satellite LLC.

I. Existing DBS Uplink Facilities

All parties agreed with the Commission’s tentative conclusion⁶ that existing DBS feeder link facilities should be grandfathered.⁷ Although there are relatively few of these facilities, they play a critical role in the delivery of video programming to millions of viewers, and must be able to continue operating as they were designed to do under the rules in force when they were licensed.

DIRECTV had agreed with the Commission’s proposal to create a “non-protection zone” around grandfathered sites and suggested that a 30 km radius would be an appropriate boundary for such a zone.⁸ SES and EchoStar had concluded, however, that no such zone is necessary,

³ *Id.*

⁴ DIRECTV Comments (November 5, 2007).

⁵ DIRECTV Reply Comments (December 5, 2007).

⁶ *FNPRM* at ¶ 151.

⁷ Grandfathered sites should include those for which applications are filed before the effective date of new interference rules.

⁸ The 30 km radius was calculated by defining a zone where $\Delta T/T$ of 6% into the 17/24 GHz BSS receiver would not be exceeded for normal feeder link and receive terminal characteristics, using the parameters set forth in DIRECTV Comments at 8.

and that new 17/24 GHz BSS operators planning to launch service in the vicinity of an existing grandfathered DBS feeder link site should make their own determination as to where their potential subscribers would not be subject to excessive levels of interference from the existing site.⁹ As noted, those determinations can vary from location to location based on topography, obstructions, and uplink operational characteristics. AT&T finds that a reasonable approach and has no objection to proceeding without the creation of a specific non-interference zone for the grandfathered sites in accordance with the SES and EchoStar proposal.

Similarly, all parties agreed that there should be some flexibility for operators of existing DBS feeder link facilities to upgrade those facilities without having to coordinate with 17/24 BSS operators, though they differed with respect to the parameters of that flexibility. DIRECTV proposed, and in the last round of reply comments, EchoStar had agreed, that operators should be allowed to install upgrades within a radius of one kilometer of their grandfathered facilities without being subjected to any interference or coordination requirements. AT&T continues to believe that this easy to administer guideline strikes the appropriate balance between the needs of DBS feeder link operators and 17/24 BSS operators. Further, AT&T has no objection to SES's previous proposal that a limit be placed on the power density towards the horizon of upgrades, to the extent that this means that upgrades would have to fall within the envelope of the power density toward the horizon already authorized for the earth station.¹⁰

⁹ SES Americom Inc. Comments (November 5, 2007) at 4; Echostar Satellite LLC Comments (November 5, 2007) at 5-6.

¹⁰ This "envelope" would be calculated using the maximum power density per 4 kHz and the minimum elevation angle specified in the existing authorization. So long as the proposed upgrade did not itself exceed the level of power density toward the horizon calculated in this manner, it would be allowable.

II. New DBS Uplink Facilities

A. Coordination

New DBS feeder link facilities based on license applications filed after the effective date of rules regarding ground path interference will be in a different posture, and those rules should require coordination with 17/24 BSS providers with existing users. AT&T supports the creation of a coordination zone around new DBS uplink facilities using the procedure in Table 9b of the *FNPRM* to establish the appropriate zone,¹¹ provided that the values in Table 9b are revised as set forth in DIRECTV's prior comments to better reflect typical parameters and thereby achieve a more appropriate coordination zone.¹²

Once the coordination zone is defined, coordination should follow a process similar to that developed for sharing in the 12 GHz band used by DBS and MVDDS operators. AT&T supports adoption of service rules, similar to those in Section 25.203(c), that would require all applicants for new DBS uplink facilities to complete prior coordination with existing and planned 17/24 GHz BSS receiving earth stations.¹³ It also supports use of a qualified and neutral third-party frequency coordinator to handle the review of sensitive subscriber data, and to require applicants to provide to the coordinator the type of information currently called for under 25.203(c) of the Commission's rules.¹⁴

¹¹ *FNPRM* at ¶ 161 and Table 9b. The parameters used for analysis must assume that 17/24 BSS receive antennas meet the Commission's performance standards, and non-conforming receive antennas, as already recognized by Commission rule, should not be protected beyond the level required to protect conforming antennas. *See* 47 C.F.R § 25.224.

¹² *See* DIRECTV Comments at 10-11.

¹³ *FNPRM* at ¶ 167.

¹⁴ *FNPRM* at ¶¶ 168-169.

B. Location

DIRECTV had previously proposed that DBS operators be required to locate new uplink facilities in areas of low population density.¹⁵ The thought behind such a requirement was that it would minimize the number of potentially affected 17/24 GHz BSS subscribers and lessen the coordination burden on DBS operators. However, in light of the other coordination and shielding requirements that are proposed, AT&T (and its DIRECTV affiliate) now agree with SES that this is additional regulation is unnecessary, as is defining what constitutes an area of “low population density.” In a sense, the location of new DBS uplink facilities is a self-governing issue, since DBS operators who wish to minimize the burdens of coordination will necessarily have the incentive to place such facilities in more remote or less densely populated areas. Even in the absence of coordination requirements, existing DBS uplink sites are already mostly located in sparsely populated areas. Going forward, those DBS providers who elect to place new uplink facilities in an area not considered “remote,” or exceeding some population density threshold, will need to manage the (potentially more burdensome) coordination required within the defined coordination zone, but should have the option to consider such a location for its facilities.

C. Shielding

AT&T does support an additional requirement that new uplink facilities be required to either erect RF shielding or locate antennas in areas where natural shielding provides at least 10 dB of attenuation, if required, so as not to exceed a specified PFD level. Accordingly, AT&T supports the previous DIRECTV proposal that new uplink facilities be required not to exceed a PFD of $-109 \text{ dBW/m}^2/\text{MHz}$ at any point beyond a radius of 10 km.¹⁶

¹⁵ DIRECTV Comments at 13-14.

¹⁶ DIRECTV Comments at 15.

It is important to balance the interests of both DBS uplink operators and 17/24 GHz BSS operators, so that the benefits of this spectrum band inure to both and the opportunities presented for 17/24 BSS services are realized. By grandfathering and allowing reasonable upgrades to existing DBS uplink sites, and imposing coordination and shielding requirements on new DBS uplink sites, the Commission can strike this appropriate balance.

Respectfully submitted,

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