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, 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	)	IB Docket No. 06-123

REPLY COMMENTS OF AT&T

AT&T Services, Inc., on behalf of its subsidiaries and affiliates, including DIRECTV (collectively, "AT&T"), submits the following reply comments in response to the International Bureau's Public Notice[1] 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 its recent comments, AT&T supported DIRECTV's 2007 proposal to utilize specific values for parameters in Table 9b of Appendix 7 of the Radio Regulation to determine the level of interference that would trigger coordination between new DBS feeder link locations and 17/24 GHz BSS subscriber terminals. [3] In relevant part, DIRECTV had originally proposed a value of 2 dB for the parameter M_s (link performance margin), in contrast to the value of 5 dB originally proposed by the Commission.[4] In 2007, SES stated that it had reviewed DIRECTV's suggestions "… which rely on more conservative assumptions regarding potential interference, and SES Americom has no objection to use of these values."[5] In its comments in this refresh of the record for the *NPRM*, however, SES now states that it is concerned that the DIRECTV value of 2 dB for M_s is too conservative, and proposes that the Commission revert back to its originally proposed value of 5 dB.[6]

DIRECTV had proposed the 2 dB value to cover the case of subscriber terminals located to the west of 100° W.L., where the downlink power flux density limit for 17/24 GHz BSS space stations operating in the 17.3–17.7 GHz band specified in the Commission's rules[7] is 6 dB lower than the maximum value in the southeast. While it continues to believe that that the value of 2 dB for M_s is appropriate for the region west of 100° W.L., AT&T acknowledges the concern that 2 dB may be too conservative to be applied across the entire country in light of the three different satellite downlink power flux density values specified in the Commission's rules for different regions of the country. As such, AT&T proposes a compromise solution that addresses both the SES concern that a value 2 dB for M_s may be too conservative country-wide, while at the same

[3] AT&T Comments (November 25, 2015) at 4.
[4] DIRECTV Comments (November 5, 2007) at 10-11.
[5] SES Reply Comments (December 5, 2007) at 5.
[6] SES Comments (November 25, 2015) at 3.
[7] 47 C.F.R. §25.208(w).

time acknowledging the rules specifying downlink pfd values that vary by 6 dB across the country.

In reviewing Table 9b of Appendix 7, and in particular the calculation of the permissible interference power value ($P_r(p)$) it can be seen that this interference power value is calculated as:

$$P_r(p) = 10\text{Log}(kT_eB) + N_L + 10\log(10^{Ms/10} - 1) - W$$

The only term in this calculation that relies upon the factor M_s is the term $10\log(10^{Ms/10} - 1)$. This term has a value of 3.3 dB when M_s equals 5 dB and a value of -2.3 dB when the value of M_s is 2 dB, for a difference of 5.6 dB, which is very close to the 6 dB variation in allowable downlink pfd from 17/24 GHz BSS satellites.

Accordingly, AT&T proposes that the Commission adopt a variable value for M_s to match the differing downlink pfd regions for 17/24 GHz BSS that tracks the variation in allowable downlink pfd. Specifically, AT&T proposes that the Commission adopt an M_s value of 4.8 dB for the highest downlink pfd regions in the southeast and Alaska/Hawaii, an M_s value of 3.0 dB for the downlink pfd region corresponding to the northeast, and an M_s value of 1.8 dB for the lowest downlink pfd region in the west. This would result in values for the term $10\log(10^{Ms/10} - 1)$ of 3.0 dB for the southeast and Alaska/Hawaii, 0 dB for the northeast, and 3.0 dB for the west. In this way the permissible interference power level at 17/24 GHz BSS subscriber terminals tracks the change in maximum allowable downlink pfd in each of the downlink pfd regions defined in the rules.

AT&T believes this proposal strikes the appropriate balance between the interests of DBS uplink operators and 17/24 GHz BSS operators in defining the coordination requirements in connection with new DBS uplink facilities.

Respectfully submitted,

/s/

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