

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 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 DIRECTV, INC.**

Overall, the initial comments filed in this proceeding evidence a fair degree of agreement on the key issues raised by the Commission. For example, all commenters agree that new 17/24 GHz BSS space stations that exceed a certain power flux-density (“PFD”) level into nearby Direct Broadcast Satellite (“DBS”) systems should be required to coordinate and that existing DBS uplink sites should be grandfathered. In these reply comments, DIRECTV, Inc. (“DIRECTV”) discusses a few respects in which the commenters disagree on the specifics of implementation. DIRECTV believes that the record in this proceeding provides a sound basis for the Commission to resolve the remaining differences to strike an appropriate balance that will protect existing DBS operations while encouraging deployment of new 17/24 GHz BSS systems.

## *1. Space Path Interference*

As DIRECTV noted in its comments, the complete lack of both (1) information on the off-axis gain of current DBS satellite receive antennas in the plane of the GSO arc, and (2) data on in-orbit interaction between operating 17/24 GHz BSS and DBS satellites strongly justify caution in establishing rules for virtual collocation of such satellites.

Accordingly, DIRECTV proposed both a minimum orbital spacing requirement and a PFD coordination trigger, an approach supported by all commenters to varying degrees.

Specifically, DIRECTV proposed that 17/24 GHz BSS satellites be required to operate at least  $0.4^\circ$  away from any DBS orbital location that is currently in use, and be required to coordinate to the extent they exceed an off-axis PFD coordination trigger of  $-93 \text{ dBW/m}^2/24 \text{ MHz}$ .<sup>1</sup> Both EchoStar and SES supported the PFD coordination trigger.<sup>2</sup> However, while SES also supported a slightly smaller orbital separation requirement ( $0.2^\circ$  to  $0.3^\circ$ ), EchoStar argued that the coordination trigger alone should be sufficient, though the Commission could adopt a presumptive minimum  $0.1^\circ$  spacing as a precautionary measure.<sup>3</sup> EchoStar also proposed that 17/24 GHz BSS operators be required to cease operations immediately if a DBS operator reported interference.<sup>4</sup>

DIRECTV continues to believe that  $0.4^\circ$  spacing should generally be required under these circumstances, and notes that EchoStar proposed  $0.4^\circ$  or greater spacing in

---

<sup>1</sup> DIRECTV Comments at 3-6.

<sup>2</sup> EchoStar Comments at 4; SES Comments at 12.

<sup>3</sup> EchoStar Comments at 4; SES Comments at 11.

<sup>4</sup> EchoStar Comments at 4.

earlier comments in this proceeding.<sup>5</sup> However, there may be situations in which coordination could achieve less spacing. To the extent all affected operators at a given location agree to the use of less orbital spacing, the Commission should allow it.

More importantly, as DIRECTV noted in its comments, these protections must be applied in a manner that maintains the required flexibility for operators to place their DBS satellites anywhere within the  $\pm 0.2^\circ$  “cluster” around each nominal DBS location – as contemplated under the international DBS Plan. Accordingly, DIRECTV has proposed that the orbital separation be measured from, and the PFD be determined at, the nearest edge of the DBS cluster, and that proposed operations closer to, or exceeding the PFD limit at, the edge would necessitate coordination with all DBS licensees within that cluster prior to commencement of 17/24 GHz BSS operations. Any regime adopted to address potential space path interference must take such an approach in order address the uncertainty in off-axis gain of current DBS satellite receive antennas and to preserve the flexibility inherent in the DBS Plan. In recognition of the potential risk to service enjoyed by millions of American consumers, DIRECTV also agrees with EchoStar’s proposal that 17/24 GHz BSS systems cease operations immediately upon notification of interference to a DBS system.

---

<sup>5</sup> See Comments of EchoStar Satellite L.L.C., IB Docket No. 06-123, at 4 (Oct. 16, 2006) (proposed  $0.4^\circ$  separation “is sufficient only to manage self-interference between two collocated (or nearly collocated) satellites operated by the same provider, but would not likely be enough if different operators were responsible for the RBW and conventional DBS satellites”).

## ***2. Ground Path Interference***

All commenters agree that existing DBS uplink facilities should be grandfathered.<sup>6</sup> However, while DIRECTV proposed that 17/24 GHz BSS receive antennas located within 30 km of such facilities should be given no protection from interference, both EchoStar and SES argued that such a non-protection zone is not necessary. Instead, they assert, each 17/24 GHz BSS operator should make its own determination as to where potential subscribers would not be subject to excessive levels of interference from an existing DBS uplink site – a determination that can vary greatly from location to location depending upon topography, obstructions, and uplink operational characteristics. DIRECTV has no objection to the approach advocated by EchoStar and SES.

In addition, all commenters agree that operators should be able to upgrade existing facilities without coordinating with 17/24 GHz BSS operators. DIRECTV proposed allowing upgrades within 1 km of each existing site. SES similarly proposed allowing upgrades within close proximity (2000 feet) of existing sites, but also would require that the power density towards the horizon for the upgrade not exceed the levels currently specified in the license for the existing facility.<sup>7</sup> To the extent that this latter requirement simply contemplates that upgrades would have to fall within the envelope of the power density toward the horizon already authorized for the earth station,<sup>8</sup> DIRECTV would support this additional requirement.

---

<sup>6</sup> DIRECTV Comments at 7; EchoStar Comments at 2, 5-6; SES Comments at 3-6.

<sup>7</sup> SES Comments at 6.

<sup>8</sup> 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.

Respectfully submitted,

**DIRECTV, INC.**

William M. Wiltshire  
Michael Nilsson  
S. Roberts Carter III  
**HARRIS, WILTSHIRE & GRANNIS LLP**  
1200 Eighteenth Street, N.W.  
Washington, DC 20036  
202-730-1300

*Counsel for DIRECTV, Inc.*

December 5, 2007

By:     /s/      
Susan Eid  
Vice President, Government Affairs  
Stacy R. Fuller  
Vice President, Regulatory Affairs  
**DIRECTV, INC.**  
444 North Capitol Street, N.W.  
Suite 728  
Washington, DC 20001  
(202) 715-2330