



Pillsbury Winthrop Shaw Pittman LLP  
2300 N Street, NW | Washington, DC 20037-1122 | tel 202.663.8000 | fax 202.663.8007

ORIGINAL

Tony Lin  
tel 202.663.8452  
tony.lin@pillsburylaw.com

September 26, 2008

**Via Courier**

Marlene H. Dortch  
Federal Communications Commission  
445 12th Street, S.W.  
Washington, D.C. 20554

FILED/ACCEPTED

SEP 26 2008

Federal Communications Commission  
Office of the Secretary

Re: DIRECTV Enterprises LLC  
File Nos. SAT-AMD-20080908-00166; SAT-AMD-20080321-00080;  
SAT-AMD-20080114-00017; SAT-AMD-20051118-00224; SAT-  
LOA-19970605-00051 (Call Sign S2244)

Dear Ms. Dortch:

Pegasus Development DBS Corporation (“Pegasus”) hereby submits this letter regarding the above-referenced 17/24 GHz Broadcasting Satellite Service (“BSS”) application of DIRECTV Enterprises LLC (“DIRECTV”) to operate a satellite at the 118.4°W orbital location. The operations of the proposed DIRECTV satellite at that location would cause more interference to Pegasus’ proposed satellite at 115.0°W than if the DIRECTV satellite were located at precisely 119.0°W, contrary to the Commission’s rules. Accordingly, the Commission should not grant DIRECTV’s application unless DIRECTV further amends the application.

On January 14, 2008, DIRECTV applied to operate a 17/24 GHz BSS satellite at full power and with full interference protection at 118.4°W.<sup>1</sup> Pegasus contemporaneously submitted a pending application to operate at full power and with

---

<sup>1</sup> See e.g., File No. SAT-AMD-20080114-00017 (Call Sign S2244), Application Narrative, at p. 5 (“DIRECTV proposes to operate [at the 118.4°W offset location] at full power and with full interference protection.”); p. 11 (“DIRECTV is applying for an orbital location that is offset 0.6° from an Appendix F slot [and] seeks to operate at full power and with full interference protection”).

full interference protection at 115.0°W,<sup>2</sup> which is an Appendix F orbital location.<sup>3</sup> Because the pending applications for adjacent satellites are considered simultaneously filed and Pegasus proposed to locate its satellite at an Appendix F location, while DIRECTV did not, the Commission's rules prohibit the grant of the DIRECTV application for full power, full protection operations at 118.4°W.<sup>4</sup> On August 1, 2008, Pegasus submitted a letter to the Commission, *inter alia*, raising this issue.<sup>5</sup>

Recognizing this problem, DIRECTV amended its application to "ensure that [its proposed operations at 118.4°W] comply with the Commission's rules governing how off-grid systems must operate in the presence of another system at the adjacent on-grid slot."<sup>6</sup> Specifically, DIRECTV proposed to remain at 118.4°W and reduce the peak EIRP of its system by 0.1 dB (i.e. from 63.0 dBW to 62.9 dBW).<sup>7</sup>

The power reduction, however, fails to ensure that the proposed DIRECTV satellite at 118.4°W will not cause more interference to Pegasus' proposed satellite at

---

<sup>2</sup> See File No. SAT-AMD-20080114-00023 (Call Sign S2700), Application Narrative, at p. 20 ("Pegasus requests authority to operate the proposed satellites at full power with full interference protection (i.e. a full-power Appendix F space station) at the following orbital locations: 91.0°W, 107.0°W, and 115.0°W.").

<sup>3</sup> Appendix F orbital locations range from 43°W to 179°W, inclusive, and are spaced four degrees apart. See *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 Broadcast-Satellite Service and for the Satellite Services Operating Bi-directionally in the 17.3-17.8 GHz Frequency Band*, Report and Order, 22 FCC Rcd 8842, at Appendix F (2007) ("17/24 GHz Order"); Order on Reconsideration, 22 FCC Rcd 17951, at Appendix B (2007) ("17/24 GHz Order on Reconsideration").

<sup>4</sup> See *17/24 GHz Order on Reconsideration*, at ¶ 26 (grant of an Appendix F satellite application will prevent the grant of a simultaneously filed full power, full interference protection application to operate a satellite at an offset location less than 4° away); ¶ 34 (establishing second filing window "in cases where an application for authority to operate at an offset location at full power conflicts with [a simultaneously filed] application for an Appendix F location"); ¶ 36 ("Any applicant proposing a full-power, offset space station that conflicts with an application for an adjacent Appendix F space station will have thirty days after the deadline for amended applications . . . to amend its application.").

<sup>5</sup> See Letter from Bruce Jacobs to Marlene Dortch (August 1, 2008).

<sup>6</sup> See File No. SAT-AMD-20080908-00166, Application Narrative, at p.2.

<sup>7</sup> *Id.* at 3.

115.0°W than if the DIRECTV satellite were located at precisely 119.0°W, as required by the Commission's rules.<sup>8</sup> By Pegasus' calculations, DIRECTV must reduce peak EIRP of its proposed satellite by 2.5 dB.

Pegasus agrees with DIRECTV that “[u]sing the standard ITU-R BO. 1213 reference antenna pattern at 17.5 GHz, a decrease in orbital spacing from 4.0° to 3.4° reduces off-axis protection to the adjacent satellite system from 23.5 dB to 21.8 dB – a difference of 1.7 dB (based on topocentric angle).”<sup>9</sup> Additionally, because DIRECTV's satellite, as originally proposed (File No. SAT-AMD-20080114-00017), has a peak power flux-density (“PFD”) of -114.2 dBW/m<sup>2</sup> /MHz,<sup>10</sup> DIRECTV must further reduce peak EIRP by 0.8 dB in order to meet the Commission's PFD limits. *See* 47 C.F.R. § 25.208(w). Accordingly, the total peak EIRP reduction must be 2.5 dB, not 0.1 dB as DIRECTV asserts.

---

<sup>8</sup> *See e.g.*, 47 C.F.R. §§ 25.140(b)(4)(applicant proposing to operate a satellite at an offset location must demonstrate that its proposed network will not cause more interference to adjacent satellite networks), 25.140(c)(3)(applicant proposing to operate at offset location must design satellite network to be capable of operating with adjacent 17/24 GHz BSS satellites less than four degrees away), 25.262(d)(“Any U.S. licensee or permittee using a 17/24 GHz BSS space station that is located less than four degrees away from a prior-authorized 17/24 GHz BSS space station . . . : (1) may not cause any more interference to the adjacent satellite network than would be caused if the adjacent 17/24 GHz BSS space station were located four degrees away from the proposed space station; and (2) must accept any increased interference that results from the adjacent space station network ....”).

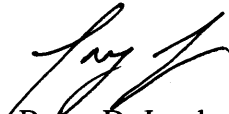
<sup>9</sup> File No. SAT-AMD-20080908-00166, Application Narrative, at p.3 n. 8.

<sup>10</sup> Pegasus calculated the PFD on the surface of the Earth using a 30 MHz noise bandwidth, rather than a 36 MHz transponder bandwidth, which DIRECTV incorrectly used. Additionally, Pegasus did not consider atmospheric losses in its computation, which DIRECTV did. As a general matter, Article 21 of the ITU Radio Regulations and the FCC's rules require the assumption of free-space propagation conditions in calculating PFD limits. Accordingly, by Pegasus' calculations, PFD (dBW/m<sup>2</sup> /MHz) = EIRP - 162.4 - 10 log (30) = 63 - 162.4 - 14.8 = -114.2. While the FCC's rules do not expressly require the assumption of free space conditions for the 17.3-17.7 GHz band and the ITU PFD limits apply only to the 17.7-17.8 GHz band, even if atmospheric losses are considered, Pegasus estimates such losses to be at most 0.8 dB and not 1.6 dB as DIRECTV argues (using SatMaster software for 99.7% availability for the downlink to Miami, gaseous attenuation is 0.35 dB and scintillation is 0.45 dB), and under that assumption, DIRECTV would still need to reduce peak EIRP of its satellite by 1.7 dB not 0.1 dB, as it proposes.

Marlene H. Dortch  
September 26, 2008  
Page 4

For these reasons, Pegasus requests that the Commission not grant DIRECTV's application for a 17/24 GHz BSS satellite at 118.4°W unless DIRECTV further amends its application, consistent with the comments stated above.

Very truly yours,



Bruce D. Jacobs  
Tony Lin

**CERTIFICATE OF SERVICE**

I, Renee Williams, hereby certify that on this 26th day of September 2008 I served a true copy of the foregoing by first-class United States mail, postage prepaid, upon the following:

Andrea Kelly\*  
Federal Communications Commission  
445 12<sup>th</sup> Street, S.W.  
Washington, D.C. 20554

William M. Wiltshire  
Michael D. Nilsson  
Harris, Wiltshire & Grannis LLP  
1200 18<sup>th</sup> Street, N.W.  
Washington, D.C. 20036  
*Counsel for DIRECTV Enterprises, LLC*

  
\_\_\_\_\_  
Renee Williams

\*By Hand Delivery