

April 15, 2015

**BY ELECTRONIC FILING**

Marlene H. Dortch  
Secretary  
Federal Communications Commission  
445 Twelfth Street, S.W.  
Washington, DC 20554

Re: *Request for Special Temporary Authority for In-Orbit Testing of  
DIRECTV 15 and DIRECTV RB-2 at 66.8° W.L.*

Dear Ms. Dortch:

DIRECTV Enterprises, LLC (“DIRECTV”) hereby requests Special Temporary Authority (“STA”) to locate the DIRECTV 15 satellite (call sign S2930) along with the DIRECTV RB-2 payload (call sign S2712) at the 66.8° W.L. orbital location for in-orbit testing (“IOT”) after launch of the satellite, which is currently scheduled for May 20, 2015.<sup>1</sup> This STA will cover a period of approximately 30 days within a 60 day window, which DIRECTV requests be keyed to become effective upon the satellite’s arrival at 66.8° W.L.

DIRECTV 15 is currently at the launch site being readied for launch. DIRECTV desires to conduct IOT for approximately two weeks before moving the satellite to its licensed position to begin commercial operations. Specifically, DIRECTV contemplates the following schedule [with approximate dates indicated in brackets]:

- After launch and orbit raising maneuvers, DIRECTV 15 will be located at 66.8° W.L. [no earlier than about June 3, 2015].
- After DIRECTV 15 reaches 66.8° W.L., DIRECTV will then commence IOT of the satellite for approximately 2 weeks.<sup>2</sup>

---

<sup>1</sup> Note that the DIRECTV 15 satellite also carries a DBS payload for which DIRECTV has not requested operating authority but for which IOT will also be conducted at this location.

<sup>2</sup> During the period covered by this STA, DIRECTV will use 29502.5 and 29505.9 MHz for its command uplinks and 20198.5 and 20199.55 MHz for its telemetry downlinks.

Marlene H. Dortch  
April 15, 2015  
Page 2 of 3

- After IOT is completed, DIRECTV 15 will then be drifted to its assigned location at 103° W.L. (nominal) over the course of approximately 26 days [reaching that orbital position on or about July 12, 2015].

In order to address the timing uncertainties normally associated with positioning a spacecraft after launch, DIRECTV requests that the STA become effective upon the arrival of DIRECTV 15 at 66.8° W.L.

Operation and testing of DIRECTV 15 and DIRECTV RB-2 during IOT will consist of performance verification testing of all transponders and antenna pattern verification testing of all antenna beams. During this testing, unmodulated CW carriers will be used to generate swept frequency response and gain transfer characteristics of each transponder. The maximum value of transmit power used during this testing will be consistent with the DIRECTV 15 and DIRECTV RB-2 applications,<sup>3</sup> except for short periods of time during gain transfer when the maximum transmit power for DIRECTV 15 could exceed that value by up to 10 dB during some tests.<sup>4</sup> This testing will not result in harmful interference to other Ka-band satellite systems as the closest co-frequency operational satellite is located more than 9° away. Nor will the testing of DIRECTV RB-2 result in harmful interference to any DBS satellite system as the closest co-frequency operational DBS satellite is located 5.3° away<sup>5</sup> and, as demonstrated in the measured transmit antenna gain submission for DIRECTV RB-2, the 17/24 GHz BSS payload on DIRECTV 15 will not exceed the -117 dBW/m<sup>2</sup>/100kHz PFD coordination trigger beyond 0.08°.<sup>6</sup> DIRECTV will also coordinate its TT&C operations with all other potentially affected operators to ensure that no harmful interference results. Furthermore, DIRECTV is prepared to terminate all testing operations immediately upon notification from the Commission that its operations cause harmful interference to any authorized user of the spectrum.

Grant of this STA request will serve the public interest by allowing DIRECTV to test the DIRECTV 15/RB-2 satellite to ensure that it is fully operational and ready to begin providing service to millions of DIRECTV subscribers from the satellite's licensed

---

<sup>3</sup> See IBFS File Nos. SAT-LOA-20140825-00094 (DIRECTV 15) and SAT-LOA-20060908-00100, SAT-MOD-20080114-00014, SAT-MOD-20080321-00077, SAT-MOD-20110727-00136, SAT-MOD-20140612-00066 (DIRECTV RB-2).

<sup>4</sup> Note that, as with IOT testing of DIRECTV 10, 11, 12, and 14, all DIRECTV 15 IOT testing will be closely coordinated with U.S. government systems under FN US334.

<sup>5</sup> DIRECTV has had initial discussions with EchoStar to coordinate the IOT of the DBS payload on DIRECTV 15 with EchoStar operations at 61.5 W.L. and 72.7 W.L., and will conduct formal discussion in the near future.

<sup>6</sup> See IBFS File No. SAT-MOD-20140612-00067.

**HARRIS, WILTSHIRE & GRANNIS LLP**

Marlene H. Dortch

April 15, 2015

Page 3 of 3

orbital location. Allowing DIRECTV to test the satellite at 66.8° W.L. will serve the public interest by minimizing the risk of interference.

Accordingly, and in light of the impending launch date, DIRECTV requests the expeditious grant of special temporary authority.

Respectfully submitted,

/s/

William M. Wiltshire

*Counsel to DIRECTV Enterprises, LLC*