



December 3, 2009

**BY ELECTRONIC FILING**

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

Re: *IBFS File No. SAT-STA-20091201-00132 (S2797)*

Dear Ms. Dortch:

DIRECTV Enterprises, LLC (“DIRECTV”) hereby submits additional information of the above referenced request for special temporary authority (“STA”) to conduct in-orbit testing (“IOT”) of the DIRECTV 12 satellite scheduled to be launched later this month. As discussed in the STA request, IOT of the spacecraft will involve the use of unmodulated CW carriers operated at transmit powers generally consistent with the DIRECTV 12 application, except for short periods of time during gain transfer measurements for spot transponders when the maximum transmit power could exceed that value by up to 7 dB. As a result, during those short periods of maximum power, DIRECTV 12 would exceed the power flux-density (“PFD”) limit in Section 25.208(c) of the Commission’s rules for the 18.3-18.8 GHz band by up to 9 dB.<sup>1</sup> Nonetheless, for the reasons discussed below, DIRECTV submits that the requested STA will not cause harmful interference to any co-primary user of the band.

The DIRECTV 12 operations in the relevant band consist of multiple spot beams supporting satellite channels in the 18.58-18.8 GHz frequency range. During IOT, each beam will be successively positioned over DIRECTV’s broadcast center located in Castle Rock, Colorado (“CRBC”). The transmit power of each beam will be increased with the transponder in linear (as opposed to automatic level control) mode in order to achieve full saturation. The spot beams will only exceed the PFD limit in Section 25.208(c) for a period of 10-15 seconds at the peak of each such test, and the frequencies used will vary as different beams are tested. Thus, over the course of four weeks of IOT, any one frequency will be subject to additional PFD during a minimal number of episodes and for a minimal amount of time in each episode.

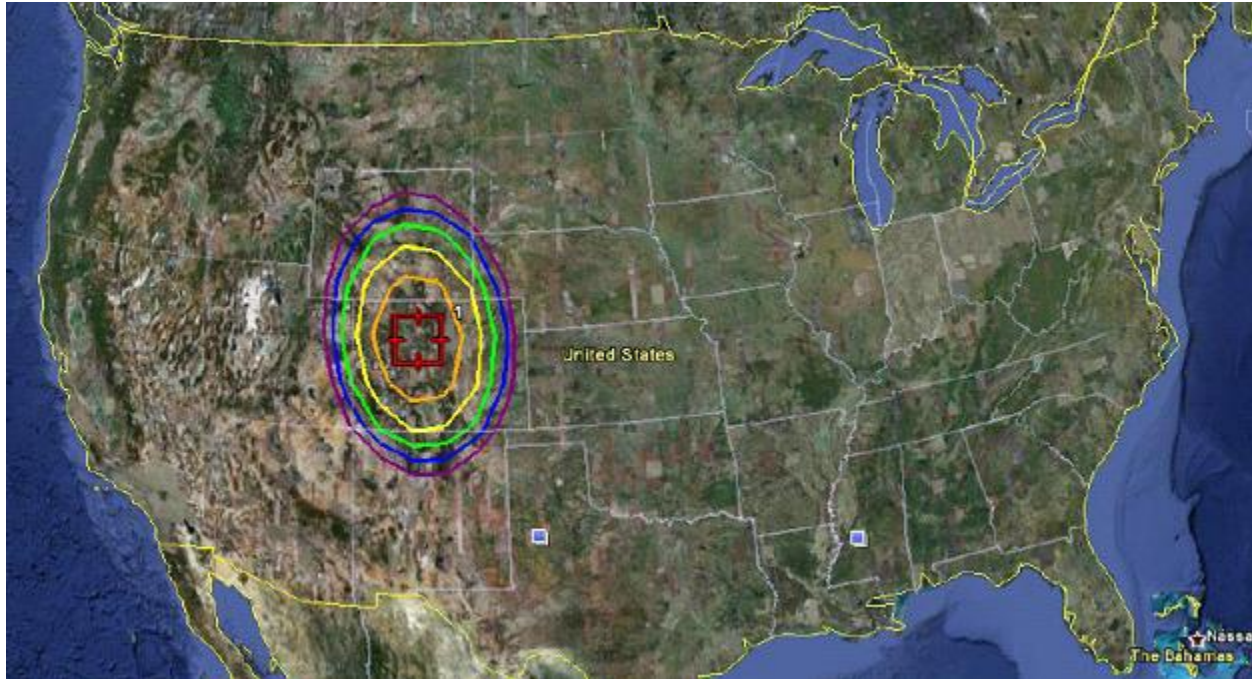
A representative view of a spot beam positioned over CRBC is shown below, including antenna gain contours out to the -10 dB contour (at which point the 9 dB exceedance of the applicable PFD level at beam peak would be completely eliminated). As can be seen in this

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<sup>1</sup> At no time during IOT will DIRECTV 12 exceed the PFD limits established in Section 25.208(d).

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diagram, the potentially affected area includes most of Colorado and Wyoming as well as northern New Mexico.



In order to determine the impact of IOT operations in the potentially affected area, DIRECTV accessed the Commission's Universal Licensing System ("ULS") to determine what terrestrial operators might also be authorized to operate in the 18.58-18.8 GHz band in Colorado, Wyoming, and New Mexico. As specified in Section 101.97 of the Commission's rules, any such system that was the subject of a license extension after June 8, 2000 is authorized on a secondary basis to FSS systems. As shown on the attached spreadsheet, of the 43 terrestrial systems identified by ULS as operating in this band in the target states, only three are operating pursuant to licenses that were not extended after June 8, 2000. Accordingly, the vast majority of these licensees operate on a secondary basis in the band.

One of the three remaining licenses (WNEF866) appears to have expired without renewal. Another (WNTD994) is centered at 18.625 GHz with a bandwidth of 10 MHz, which places these operations essentially entirely in a guard band between two DIRECTV 12 transponders. The third (WNTD993) is centered at 18.655 GHz with a bandwidth of 6.3 MHz, which places these operations 7 MHz off the center of a DIRECTV 12 transponder. Because this license includes a single 6.3 MHz emission designator, and because all DIRECTV 12 testing will occur at transponder center frequencies, the CW signal used for testing this transponder during DIRECTV 12 IOT would fall approximately 4 MHz out of band – which should be more than sufficient for the out-of-band signal rejection capabilities of the terrestrial system to attenuate the DIRECTV 12 signal sufficiently to avoid interference.

**WILTSHIRE & GRANNIS LLP**

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Accordingly, DIRECTV submits that, even though the IOT operations of DIRECTV 12 will exceed the PFD limits in Section 25.208(c) for a limited number of very short-term events, grant of the requested STA will not result in harmful interference to any co-primary user of the 18.3-18.8 GHz band.<sup>2</sup>

In addition, DIRECTV would like to take this opportunity to provide 24/7 contact information in case any issue arises in connection with the operations of DIRECTV 12 under the requested STA. The direct number at DIRECTV's CRBC facility is 720-733-7290, where someone should be on duty at all times during IOT.

If you have any questions, please do not hesitate to contact me.

Respectfully submitted,

/s/

William M. Wiltshire  
*Counsel to DIRECTV Enterprises, LLC*

cc: Andrea Kelly  
Kathryn Medley

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<sup>2</sup> To the extent the Commission concludes that a waiver of the PFD limit in Section 25.208(c) is required in connection with this STA request, DIRECTV submits that the public interest would be served by the grant of such a waiver for the reasons stated herein, and requests that such a waiver be granted.

## ULS Terrestrial Licenses in the 18.58-18.8 GHz Band

### Wyoming

Call sign	License activity	Date
WGW709	Renewal	12/5/2000
WLV863	Renewal	1/17/2001
WLW555	Renewal	1/17/2001

### Colorado

Call sign	License activity	Date
KAH90	Renewal	9/6/2000
KBC20	Renewal	4/2/2008
KBD28	Renewal	9/6/2000
KCM97	Renewal	4/2/2008
KFD63	Renewal	7/4/2000
KHT45	Renewal	4/2/2008
KXR22	Renewal	1/9/2001
WLC746	Renewal	3/13/2001
WLL206	Renewal	3/13/2001
WLM388	Renewal	2/27/2001
WLS557	Renewal	1/23/2002
WLT597	Renewal	3/13/2001
WLT687	Renewal	9/6/2000
WLT830	Renewal	3/13/2001
WLT958	Renewal	3/13/2001
WLU342	Renewal	3/13/2001
WLU957	Renewal	9/6/2000
WLV331	Renewal	3/13/2001
WLV735	Renewal	3/15/2001
WML462	Renewal	2/27/2001
WMQ382	Renewal	1/17/2001
WMR770	Renewal	9/6/2000
WMS986	Renewal	9/6/2000
WNEV873	Renewal	4/2/2008
WNEW980	Renewal	1/30/2009
WNTD904	Renewal	9/22/2009
WNTD993	Renewal	5/31/2000
WNTD994	Renewal	5/31/2000
WNTH275	Renewal	4/2/2008
WNTH382	Renewal	9/27/2000

WNTK920	Renewal	8/10/2001
WNTK921	Renewal	11/4/2008
WNTQ394	Renewal	9/25/2002
WPJC735	Renewal	9/6/2000
WQBJ319	Issued	10/19/2004

**New Mexico**

Call sign	License activity	Date
KLX60	Renewal	12/22/2000
KOE33	Renewal	1/6/2001
WMK343	Renewal	2/27/2001
WNEF886	Expired*	9/17/1999
WPOT561	Renewal	2/27/2009