



April 29, 2011

**BY ELECTRONIC FILING**

Marlene H. Dortch, Secretary  
Federal Communications Commission  
445 12<sup>th</sup> Street, S.W.  
Washington, D.C. 20554

Re: *IB Docket No. 06-123*

Dear Ms. Dortch:

On April 28, 2011, Jack Wengryniuk and undersigned counsel representing DIRECTV, Inc. (“DIRECTV”) met with Charles Mathias, Senior Legal Advisor to Commissioner Baker, with respect to the above referenced proceeding. Specifically, we discussed the potential for 17/24 GHz BSS satellites to cause space path interference to operational DBS satellites, and the operational safeguards DIRECTV has proposed to mitigate that risk. The substance of the presentation is set forth in the attached materials.

Respectfully submitted,

/s/

William M. Wiltshire  
*Counsel for DIRECTV, Inc.*

Attachments

cc: Charles Mathias

## 17/24 GHz BSS SPACE PATH ISSUES

- 17/24 GHz BSS is often referred to as “reverse DBS” because it transmits to subscribers on the same frequencies that DBS satellites use to receive signals from uplink centers.
  - Creates potential for inter-satellite interference
  - As the nation’s largest DBS operator and a 17/24 GHz BSS licensee, DIRECTV has an incentive to find a fair and optimal solution
- As we will explain, DIRECTV proposed a three-part strategy
  - Require 0.4° minimum spacing from edge of DBS cluster
  - Establish a PFD coordination threshold at edge of DBS cluster
  - Require measurement of 17/24 GHz BSS antenna characteristics in the plane between satellites

### *Minimum Spacing*

- The ITU has adopted a recommendation for minimal orbital spacing of BSS satellites that ranges (depending upon assumptions) from 0.12° to 0.4°
- What we don’t know
  - No experience with DBS and 17/24 GHz BSS satellites operating in close proximity
  - No information on amount of signal transmitted by 17/24 GHz BSS satellites toward adjacent satellites (since no need to measure before)
  - Variance on position within the  $\pm 0.2^\circ$  cluster around the nominal DBS orbital location where you will find actual DBS satellites at a given time
- What we do know
  - Interference will compromise DBS service received by millions of subscribers nationwide
  - DBS operators need to maintain the flexibility to locate satellites anywhere in the internationally-recognized cluster “box”
- Accordingly, should take a conservative approach
  - 0.4° spacing (high side of ITU recommendation)
  - Measure from edge of ITU cluster (to preserve flexibility)
  - If able to coordinate less spacing with all affected operators, can do so

### *PFD Coordination Trigger*

- FCC has proposed a PFD coordination trigger of  $-93 \text{ dBw/m}^2/24 \text{ MHz}$
- All commenters support this trigger – an important back-up to presumed protection of orbital spacing
- Here again, DIRECTV believes this should be applied at the edge of the cluster in order to preserve flexibility

### *Satellite Antenna Data*

- Because there has never been an issue before of adjacent satellites transmitting and receiving in the same bands, applicants have never been required to provide off-axis antenna gain information in the direction of other satellites
- Without this information, it is not possible to accurately determine the PFD level and other aspects of the interference environment
- DIRECTV proposed that such data should be required for 17/24 GHz BSS applicants
  - Even applies to satellites not initially located near a DBS orbital location, since they may move in the future
- Commenters generally support, and manufacturers can supply this data
- Taken together, these three safeguards will preserve DBS service enjoyed by millions while imposing minimal burdens on 17/24 GHz BSS operators

# Current US DBS Satellite Configuration

4-27-11

