

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of)	
)	
DIRECTV ENTERPRISES, LLC)	File Nos. SES-MFS-20111104-01314
)	SES-MFS-20111104-01315
Request for Modification of Earth)	SES-MFS-20111104-01317
Station Licenses)	SES-MFS-20111104-01320
)	SES-MFS-20111104-01322
)	SES-MFS-20111104-01324
)	

COMMENTS OF IRIDIUM CONSTELLATION LLC

Iridium Constellation LLC (“Iridium”) hereby comments on the above-captioned applications filed by DIRECTV Enterprises, LLC (“DIRECTV”). Iridium has no objection to a grant of the applications, but is filing these comments to clarify certain matters.

In its applications, DIRECTV seeks authority to add “ALSAT” as a point of communication for its above-referenced earth stations, which are located in Arizona. The earth stations operate on Ka-band frequencies, including the 29.25-29.3 GHz sub-band. DIRECTV operates Ka-band geostationary orbit satellites (“GSO”) with which its Arizona earth stations communicate.

Iridium operates a constellation of non-geostationary orbit (“NGSO”) satellites that use Ka-band frequencies, including the 29.25-29.3 GHz sub-band, for feeder links. Iridium’s primary feeder link facility is located in Arizona.

In accordance with the Commission's requirements for the shared 29.25-29.5 GHz band, DIRECTV provided an exhibit with its applications assessing the potential for interference from DIRECTV's earth station transmissions to Iridium's feeder links. DIRECTV calculated that the percentage of time associated with in-line events during which interference could occur is on the order of 0.0003% to 0.0005%. Based on its belief that Iridium's feeder links are designed for unavailability up to 0.5% of the time, DIRECTV concluded there would be no material impact on Iridium's operations.

Iridium takes no issue with DIRECTV's determination of no material impact. Iridium wishes, however, to clarify three matters - availability requirements, cumulative effects, and GSO/NGSO coordination - that bear on DIRECTV's determination and on future determinations that may be made.

Availability requirements. The 0.5% unavailability figure relied upon by DIRECTV, which is another way of saying that 99.5% availability is needed, is no longer accurate. In its interference analysis, DIRECTV refers to statements concerning availability that were made in the original application for the Iridium system. At the time that application was filed, it was contemplated that a large number of feeder link terminals, located in a variety of climates around the world, would access the Iridium system. But the ultimate design of Iridium's ground network did not take this approach. Rather, there is a single earth station facility, located in Tempe, Arizona, through which all of Iridium's commercial traffic is routed. Because of this single-location network architecture, a higher level of availability is required, *i.e.*, Iridium

needs 99.99% availability for its feeder links. This availability takes into account all possible link impairments, including interference and atmospheric and propagation conditions.

Accordingly, future applicants analyzing the potential for interference to Iridium's feeder links should base their analyses on an availability figure for Iridium of 99.99%, not 99.5%. DIRECTV's showing satisfies the 99.99% availability standard.

Cumulative effects. DIRECTV's interference analysis appears to be based on the potential for interference presented by transmissions from a single earth station. Interference, however, is cumulative. Iridium's feeder links are subject to interference from various sources, including the multiple earth stations that are the subject of the above-captioned applications and earth stations operated by other licensees.

Because interference is cumulative, analyses such as the one provided by DIRECTV are only a starting point. In the future, Iridium may need to object to proposed operations that are not, by themselves, predicted to cause interference to Iridium's feeder links, but that are predicted to cause such interference when viewed in combination with other interference sources.

GSO/NGSO coordination. Section 25.258(a) of the Commission's rules requires that there be coordination between operators of GSO FSS earth stations and NGSO MSS feeder links using frequencies in the 29.25-29.5 GHz band. Pursuant to Section 25.258(a), DIRECTV and Iridium are coordinating. In light of the analysis provided by

DIRECTV, Iridium believes there should be no impediment to a successful coordination in this matter. Iridium reserves the right, however, to seek relief should the outcome of its coordination with DIRECTV, or the outcome of any future coordination, prove unsatisfactory.

Respectfully submitted,

IRIDIUM CONSTELLATION LLC

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CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing Comments of Iridium Constellation LLC was sent by hand on this 16th day of December, 2011, to the following:

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Attention: Jack Wengryniuk*

/s/ Jennifer Tisdale
Jennifer Tisdale

*Delivered electronically