

Before the  
**Federal Communications Commission**  
Washington, DC 20554

In the Matter of

Inmarsat Mobile Networks, Inc.

Application for Special Temporary  
Authority for Paumalu, Hawaii Earth  
Station, Call Sign KA25

File No. SES-STA-20150326-00182

**COMMENTS OF INTELSAT LICENSE LLC**

Intelsat License LLC (“Intelsat”) hereby comments on the above-captioned application submitted by Inmarsat Mobile Networks, Inc. (“Inmarsat Mobile Networks”) for Special Temporary Authority (“STA”) for 180 days to use its Paumalu, Hawaii earth station, Call Sign KA25, to provide C-band telemetry, tracking, and control (“TT&C”) communications for the Inmarsat-5 F3 spacecraft, which will be located at, or close to, 180.0° E.L. during its Launch and Early Orbit Phase (“LEOP”), electric orbit raising, and In-Orbit Testing (“IOT”).<sup>1</sup> Intelsat operates the C/Ku-band Intelsat 18 satellite (Call Sign S2817) at 180.0° E.L.<sup>2</sup> Intelsat therefore has a clear interest in ensuring that Inmarsat Mobile Networks’ operations do not cause harmful interference to the ongoing operations of Intelsat 18.

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<sup>1</sup> See *Satellite Communications Services; Satellite Radio Applications Accepted For Filing*, Report No. SES-01736, File No. SES-STA-20150326-00182 (Apr. 1, 2015) (Public Notice).

<sup>2</sup> *Policy Branch Information; Actions Taken*, Report No. SAT-00796, File No. SAT-LOA-20101014-00219 (Jul. 29, 2011) (Public Notice).

The Inmarsat-5 F3 spacecraft is a Ka-band satellite with C-band frequencies “for TT&C during transfer orbit and for emergency purposes.”<sup>3</sup> In the instant STA application, Inmarsat Mobile Networks proposes to add the Inmarsat-5 F3 spacecraft as a C-band point of communication for the KA25 earth station for a five to six week electrical propulsion orbit raising phase followed by a one month IOT phase “at (or close to) the geostationary location of 180° E.L.”<sup>4</sup> Presumably, Inmarsat Mobile Networks will seek additional authority as necessary to use the KA25 earth station for emergency C-band TT&C purposes.<sup>5</sup>

Inmarsat Mobile Networks’ assertion that “all [coordination] issues have been satisfactorily resolved”<sup>6</sup> is not accurate. The use of the KA25 earth station to provide TT&C in C-band frequencies to the Inmarsat-5 F3 spacecraft at, or in close proximity to, 180.0° E.L., even for limited periods of time, will cause harmful interference to Intelsat’s co-frequency Intelsat 18 satellite located at 180.0° E.L. This interference unquestionably will cause disruption and service outages for the customers currently receiving service on the Intelsat 18 transponders that use the same C-band frequencies as proposed by Inmarsat Mobile Networks. Although Inmarsat has commenced coordination discussions with Intelsat, it has not informed Intelsat about how it intends to protect existing Intelsat services on Intelsat 18.

Prior to action by the Federal Communications Commission (“FCC”) on this application, Inmarsat Mobile Services should be required to file additional detailed technical information to

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<sup>3</sup> Inmarsat Mobile Networks, Inc., Application for Special Temporary Authority for Paumalu, Hawaii Earth Station, Call Sign KA25, File No. SES-STA-20150326-00182, Technical Annex at 1 (filed Mar. 26, 2015) (“KA25 STA Application”).

<sup>4</sup> KA25 STA Application, Narrative at 1.

<sup>5</sup> Inmarsat Mobile Networks states that the satellite “is meant to serve the United States”. *Id.* at 3.

<sup>6</sup> *Id.* at 4.

demonstrate how C-band TT&C can be conducted without causing harmful interference to Intelsat's existing use of the same frequencies. Instead of providing such information, Inmarsat Mobile Networks is seeking a waiver for portions of Section 25.114, including information related to "antenna patterns" and "energy."<sup>7</sup> The provision of such information, however, is necessary for Intelsat to better assess the potential service disruptions to its customers. The FCC therefore should deny this waiver request unless and until coordination with Intelsat has been achieved.

In addition, the STA application does not provide an exact orbital location for IOT. Instead, it specifies operations "at (or close to) the geostationary location of 180° E.L."<sup>8</sup> The FCC should require Inmarsat Mobile Networks to specify the precise IOT location. Obviously, conducting IOT at a location with greater orbital separation from Intelsat 18 at 180.0° E.L. may mitigate the harmful interference caused by Inmarsat Mobile Networks' use of the C-band frequencies for this time period. Even so, additional technical information would still be required to demonstrate how Inmarsat Mobile Networks' later use of C-band frequencies for back-up TT&C to the Inmarsat-5 F3 satellite once it is located at the nominal 180.0° E.L. orbital location can be conducted without harming customers on Intelsat 18.

For the reasons set forth herein, the FCC should deny Inmarsat Mobile Networks' waiver request for portions of Section 25.114 unless Inmarsat Mobile Networks first achieves coordination with Intelsat. Additionally, the FCC should require Inmarsat Mobile Networks to specify the Inmarsat-5 F3 spacecraft's precise IOT location.

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<sup>7</sup> *Id.* at 2.

<sup>8</sup> *Id.* at 1.

Respectfully submitted,

*/s/ Susan H. Crandall*

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April 30, 2015

**CERTIFICATE OF SERVICE**

I, Derrick Johnson, do hereby certify that on this 30th day of April 2015, a copy of the foregoing Comments of Intelsat License LLC is being sent via first class, U.S. Mail, postage paid, to the following:

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