June 22, 2012

Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

Re: Request for Special Temporary Authority for Intelsat 20,
File No. SAT-LOA-20111024-00208, Call Sign S2847

Dear Ms. Dortch:

Intelsat License LLC ("Intelsat") herein requests a grant of Special Temporary Authority ("STA")[1] for Intelsat 20 (Call Sign S2847) for 30 days—from July 27, 2012 through August 25, 2012—to (1) seek a waiver of the U.S. Table of Frequency Allocations to permit launch and early orbit phase ("LEOP") operations using downlink frequencies in the 12700-12750 MHz band in Region 2;[2] (2) conduct in-orbit testing ("IOT") at 63.15º E.L.; and (3) drift the satellite to its permanent location of 68.5° E.L.[3] Intelsat 20 currently is scheduled to be launched on July 27, 2012.

LEOP. Intelsat seeks a waiver of the U.S. Table of Frequency Allocations to permit Intelsat 20 LEOP telemetry downlink Fixed-Satellite Service ("FSS") transmissions in the 12700-12750 MHz band in Region 2.[4] In the U.S. Table of Frequency Allocations, the 12700-12750 MHz band is allocated to Fixed

---

1 Intelsat has filed this STA request, an FCC Form 159 and an $860.00 filing fee electronically via the International Bureau's Filing System.

2 The authorization for the Intelsat 20 satellite does not seek authority to operate the Intelsat 20 satellite in the 12700-12750 MHz band in Region 2. *See Intelsat License LLC, Application for Authority to Launch and Operate Intelsat 20, a Replacement Satellite With New Frequencies, at 68.5º E.L.*, File No. SAT-LOA-20111024-00208, at 10 (filed Oct. 24, 2011) ("Intelsat 20 Application").

3 *See Policy Branch Information; Satellite Space Applications Accepted for Filing*, Report No. SAT-00830, File No. SAT-LOA-20111024-00208 (Dec. 23, 2011) (Public Notice). During the drift from 63.15° E.L. to 68.5º E.L., only the satellite's TT&C frequencies will be utilized.

4 Intelsat's application for authority to launch and operate the Intelsat 20 satellite includes a request to operate in the frequencies necessary to conduct LEOP transmissions that are not included in this STA request for the Ku-band downlink. *See* Intelsat 20 Application, *supra* note 2.

Service ("FS"), Mobile Service ("MS"), and uplink Fixed-Satellite Service ("FSS").[5]

The Intelsat 20 satellite LEOP transmissions will be 500 kHz transmissions centered at the 12746.5 MHz, 12747.0 MHz, 12748.0 MHz, and 12748.5 MHz frequencies.

Intelsat will coordinate LEOP operations for Intelsat 20 with all operators of satellites that use the same frequency bands and are in the LEOP path. As such, there will be no risk of interference with respect to lawfully operating, co-frequency satellites. Nevertheless, all operators of satellites in that path will be provided with an emergency phone number where the licensee can be reached in the event that harmful interference occurs. The 24x7 contact information for the Intelsat 20 LEOP mission is as follows:

Ph.: (202) 944-7701 – East Coast Operations Center (primary)
(310) 525-5900 – West Coast Operations Center (back-up)
Request to speak with Bob Main.

The Commission may grant a waiver for good cause shown.[6] The Commission typically grants a waiver where the particular facts make strict compliance inconsistent with the public interest.[7] In granting a waiver, the Commission may take into account considerations of hardship, equity, or more effective implementation of overall policy on an individual basis.[8] Waiver therefore is appropriate where special circumstances warrant a deviation from the general rule, and such a deviation will serve the public interest.

Good cause exists for a waiver because Intelsat's downlink use of the 12700-12750 MHz band for LEOP in Region 2 will not cause harmful interference to any terrestrial stations or satellites.[9] Terrestrial stations within the United

---

[5] 47 C.F.R. § 2.106. In Region 2, the International Table of Frequency Allocation allocates the 12700-12750 MHz band to FS, MS and FSS (Earth-to-space).

[6] 47 C.F.R. § 1.3.

[7] *N.E. Cellular Tel. Co. v. FCC*, 897 F.2d 1164, 1166 (D.C. Cir. 1990) ("*Northeast Cellular*").

[8] *WAIT Radio v. FCC*, 418 F.2d 1153, 1159 (D.C. Cir. 1969); *Northeast Cellular*, 897 F.2d at 1166.

[9] *See Intelsat North America LLC, Application for Authority to Modify Earth Station Authorization to Provide Launch and Early Orbit Phase ("LEOP") Operations for Newly Launched Satellites*, Order and Authorization, 21 FCC Rcd 14672, 14674 (¶ 6) (Int'l Bur. 2006) ("If a proposal

States will not be subjected to harmful interference from the telemetry transmissions of Intelsat 20 because the satellite's telemetry carriers are compliant with the International Telecommunication Union ("ITU") space-to-Earth power flux density ("PFD") limits over the Earth. Specifically, in order to ensure protection of terrestrial communication links from space station transmissions, Article 21.16 of the ITU Radio Regulations imposes PFD limits on satellite transmissions in the space-to-Earth direction.[10] In the pending Intelsat 20 application, Intelsat calculated the PFD level of its telemetry carriers on the Earth.[11] These calculations show that the Intelsat 20 telemetry transmissions will be compliant with the PFD limits specified in Art. 21.16 of the ITU Radio Regulations.[12] Accordingly, terrestrial stations operating in ITU Region 2 will not be subjected to harmful levels of interference from Intelsat 20's telemetry transmission. Moreover, space stations operating in the 12700-12750 MHz frequency band will not be impacted because Intelsat will coordinate the telemetry of Intelsat 20 with any affected satellite operators that are in the LEOP path.

IOT. Intelsat seeks to conduct in-orbit testing of Intelsat 20 (Call Sign S2847) at 63.15º E.L. in the bands 3700-4200 MHz (downlink), 5925-6675 MHz (uplink), 10950-11200 MHz (downlink), 11450-11700 MHz (downlink), 12500-12750 MHz (downlink),13750-14500 MHz (uplink), 29500-30000 MHz (uplink) and 19700-20200 MHz (downlink). To Intelsat's knowledge, the only co-frequency satellites within plus/minus six degrees of 63.15º E.L. are Intelsat 904 at 60.0º E.L., Intelsat 902 at 62.0º E.L., Intelsat 906 at 64.15º E.L., Intelsat 17 at 66.0º E.L., Intelsat 7 at 68.65 E.L., Intelsat 10 at 68.5º E.L., and Inmarsat 3-F1 at 64.5°E.L. Intelsat will coordinate with Inmarsat, the operator of Inmarsat 3-F1, regarding the Intelsat 20 IOT. With regard to the remaining spacecraft, Intelsat will internally coordinate the proposed testing

---

will not cause interference to other licensed operations, the Commission generally authorizes it if it is otherwise in the public interest.").

[10] ITU Radio Regulations, Art. 21.16 (2008). For ITU Region 2, PFD limits are specified only for non-geostationary satellites operating in the 11.7 – 12.7 GHz band. However, these limits may also be applied to geostationary satellites, since the PFD limit is intended to protect terrestrial stations from space station transmissions irrespective of whether the radiating space station is geostationary or non-geostationary. Actually, when converted to the same reference bandwidth, these limits are identical to those applicable to geostationary FSS space stations in Region 3.

[11] *See* Intelsat 20 Application, Engineering Statement at Exhibit 11.

[12] It is noted that calculations in the Intelsat 20 application addressing the PFD produced on the Earth by the telemetry transmissions show that there is enough margin for the PFD to be met even when during LEOP the satellite is at a height lower than that corresponding to the geostationary orbit.

with the operations of these satellites. In the unlikely event that harmful interference occurs, Intelsat will take all necessary steps to eliminate the interference.

Intelsat is aware that FSS operations are not authorized in the 12500-12750 MHz band in Region 2. In-orbit testing of Intelsat 20 will be conducted by earth stations located outside the United States and will not affect satellite or terrestrial operations in the 12500-12750 MHz band in Region 2.

Intelsat has assessed and limited the probability of the space station becoming a source of debris as a result of collision with large debris or other operational space stations during in-orbit testing at 63.15º E.L. Intelsat 20 will not be located at the same orbital location as another satellite or at an orbital location that has an overlapping station-keeping volume with another satellite. Further, Intelsat is not aware of any other FCC licensed system, or any other system applied for and under consideration by the FCC, having an overlapping station-keeping volume with Intelsat 20. Finally, Intelsat is not aware of any system with an overlapping station-keeping volume with Intelsat 20 that is the subject of an ITU filing and that is either in orbit or progressing towards launch.

Drift. During the drift from 63.15º E.L. to 68.5° E.L., Intelsat will utilize only the satellite's TT&C frequencies and will follow industry practices for coordinating TT&C transmissions during the relocation process. The specific TT&C frequencies are as follows:

Uplink:

13750.5 (V)
14498.0 (V)
13750.5 (LHCP)
14498.5 (LHCP)

Downlink:

12746.5 (V)
12747.0 (V)
12748.0 (V)
12748.5 (V)
12746.5 (LHCP)
12747.0 (LHCP)
12748.0 (LHCP)
12748.5 (LHCP)

Grant of this STA request and waiver of the U.S. Table of Frequency Allocations set forth in Section 2.106 of the FCC's rules will facilitate the safe launch of the Intelsat 20 satellite. The in-orbit testing of Intelsat 20 at 63.15º E.L. is a critical step in ensuring that the satellite will be fully operational at 68.5º E.L. The subsequent drift of the satellite to 68.5° E.L. will ensure continuity of service to customers, and thereby promotes the public interest.

For the reasons set forth herein, Intelsat respectfully requests that the Commission grant this request.

Sincerely,

/s/ Susan H. Crandall

Susan H. Crandall
Assistant General Counsel

Intelsat Corporation

cc: Robert Nelson
Kathyrn Medley
Stephen Duall
Jay Whaley