

June 21, 2012

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



Re: Request for Extension of Special Temporary Authority for
Intelsat 19, File No. SAT-RPL-20111222-00245,
Call Sign S2850

Dear Ms. Dortch:

Intelsat License LLC (“Intelsat”) herein requests an additional 30 days — from June 30, 2012 through July 29, 2012 — of the Special Temporary Authority (“STA”)¹ previously granted Intelsat for its Intelsat 19 satellite (call sign S2850) to (1) permit launch and early orbit phase (“LEOP”) 500 kHz wide telemetry transmissions centered at the 12253.5 MHz, 12254.0 MHz, 12256.0 MHz, and 12256.5 MHz towards Region 2,² (2) conduct in-orbit testing (“IOT”) at 176.0° E.L. in the 3700-4200 MHz (downlink), 5925-6425 MHz (uplink), 12250-12750 MHz (downlink), and 14000-14500 MHz (uplink) frequency bands, and (3) drift from the 176.0° E.L. IOT location to the 166.0° E.L. permanent location using the satellite’s telemetry, tracking and command (“TT&C”) frequencies.³ Intelsat 19 was launched on June 1, 2012. As part of this extension request, Intelsat continues to seek a waiver of the U.S. Table of Frequency Allocations to permit IOT and drift operations using downlink frequencies in the 12250-12750 MHz band in Region 2. LEOP operations have been completed and the satellite currently is undergoing in-orbit testing.

¹ Intelsat has filed this STA request, an FCC Form 159, a \$860.00 filing fee and this supporting letter electronically via the International Bureau’s Filing System (“IBFS”).

² Intelsat’s application for authority to launch and operate the Intelsat 19 satellite included 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 Policy Branch Information; Actions Taken*, Report No. SAT-00871, File No. SAT-RPL-20111222-00245 (June 1, 2012) (Public Notice) (“Intelsat 19 Application”).

³ *See Policy Branch Information; Actions Taken*, Report No. SAT-00871, File No. SAT-STA-20120508-00081 (June 1, 2012) (Public Notice).

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IOT. Intelsat will continue in-orbit testing of Intelsat 19 at 176.0° E.L. in the 3700-4200 MHz (downlink), 5925-6425 MHz (uplink), 12250-12750 MHz (downlink), and 14000-14500 MHz (uplink) frequency bands. To Intelsat's knowledge, the co-frequency satellites within plus/minus six degrees of 176.0° E.L. are GE-23 at 172.0° E.L., Inmarsat 3-F3 at 178.0° E.L., Intelsat 18 at 180.0° E.L., and Intelsat 602 at 177.85° E.L. Intelsat has coordinated the Intelsat 19 in-orbit testing with GE Satellite and Inmarsat, Ltd., the operators, respectively, of GE-23 and Inmarsat 3-F3. With regard to the remaining spacecraft, Intelsat will continue to internally coordinate the proposed testing 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 also not aware of any geostationary space station in Region 2 receiving in the 12700-12750 MHz band.

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 176.0° E.L. Intelsat 19 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 19. Finally, Intelsat is not aware of any system with an overlapping station-keeping volume with Intelsat 19 that is the subject of an ITU filing and that is either in orbit or progressing towards launch.

Drift. During the drift from 176.0° E.L. to 166.0° E.L., only the satellite's TT&C frequencies will be utilized. Intelsat will coordinate the telemetry (and other TT&C) transmissions of Intelsat 19 with the operator of any other co-frequency satellite that may be in its drift path.

Request for Waiver

In the U.S. Table of Frequency Allocations, the 12250-12700 MHz band is allocated to Fixed Service ("FS") and Broadcast Satellite Service ("BSS"); the 12700-12750 MHz band is allocated to FS, Mobile Service ("MS"), and uplink Fixed-Satellite Service ("FSS").⁴ Intelsat seeks continued waiver of

⁴ 47 C.F.R. § 2.106. In Region 2, the International Table of Frequency Allocation allocates the 12250-12500 MHz band to Broadcast Service, BSS, FS, and MS on a co-primary basis; and the 12700-12750 MHz band to FS, MS and FSS (Earth-to-space).

the U.S. Table of Frequency Allocations to allow use of the 12250-12750 MHz band for downlink Fixed-Satellite Service (“FSS”) in Region 2.

The Commission may grant a waiver for good cause shown.⁵ The Commission typically grants a waiver where the particular facts make strict compliance inconsistent with the public interest.⁶ 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.⁷ Waiver is therefore appropriate if special circumstances warrant a deviation from the general rule, and such a deviation will serve the public interest.

Good cause exists for waiver to authorize LEOP transmissions and the drift of Intelsat 19 from 176.0° E.L. to 166.0° E.L. because Intelsat’s use of the 12250-12750 MHz band for these purposes will not cause harmful interference to any terrestrial stations or satellites.⁸ Terrestrial stations within the United States will not be subjected to harmful interference from the telemetry transmissions of Intelsat 19 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.⁹ In the Intelsat 19 application, Intelsat calculated the PFD

⁵ 47 C.F.R. §1.3.

⁶ *N.E. Cellular Tel. Co. v. FCC*, 897 F.2d 1164, 1166 (D.C. Cir. 1990) (“*Northeast Cellular*”).

⁷ *WAIT Radio v. FCC*, 418 F.2d 1153, 1159 (D.C. Cir. 1969); *Northeast Cellular*, 897 F.2d at 1166.

⁸ 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 will not cause interference to other licensed operations, the Commission generally authorizes it if it is otherwise in the public interest.”).

⁹ 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.

level of its telemetry carriers on the Earth.¹⁰ These calculations show that the Intelsat 19 telemetry transmissions will be compliant with the PFD limits specified in Art. 21.16 of the ITU Radio Regulations.¹¹ Accordingly, terrestrial stations operating in ITU Region 2 will not be subjected to harmful levels of interference from Intelsat 19's telemetry transmission. Moreover, as explained above, space stations operating in the 12250-12750 MHz frequency band will not be impacted because Intelsat will coordinate the telemetry of Intelsat 19 with any affected satellite operators that are in the LEOP or drift path.

Good cause also exists for waiver to allow Intelsat to conduct IOT of the Intelsat 19 satellite at 176.0° E.L. in the 12250-12750 MHz downlink band because it will not cause harmful interference to any terrestrial stations or satellites.¹² Intelsat will conduct all IOT of these frequencies from an earth station located outside ITU Region 2 in Kumsan, South Korea. In addition, during IOT the satellite bias will be maintained such that transmissions from Intelsat 19 in the 12250-12750 MHz band into ITU Region 2 are limited geographically to ocean areas. As such, the transmissions during IOT will not affect terrestrial systems in ITU Region 2.

Space stations operating in the 12250-12750 MHz frequency band will not be impacted by IOT operations because Intelsat will coordinate with any affected satellite operators. Moreover, according to the ITU Region 2 BSS Plan, in the 12250-12700 MHz band, no BSS assignment can be located further west than 175.2° W.L. Hence, there is 8.8° of orbital separation between Intelsat 19 at 176° E.L., where the satellite will conduct in-orbit testing, and the nearest BSS network that could provide service to any portion of ITU Region 2. With this orbital separation, there would be no risk of harmful interference to BSS networks from the operation of Intelsat 19 in the 12250-12700 MHz band. Moreover, there are no BSS satellites currently in operation at 175.2° W.L.; the nearest operational BSS satellite to Intelsat 19 that serves any portion of ITU Region 2 in the 12250-12700 MHz band is located at 129.0° W.L. Accordingly, no operational BSS satellite providing service to ITU Region 2 would be subjected to harmful interference from the Intelsat 19 telemetry transmissions.

¹⁰ See Intelsat 19 Application, Engineering Statement at Exhibit 10.

¹¹ It is noted that calculations in the Intelsat 19 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.

¹² See *supra* note 8.

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Grant of this STA extension request and continued waiver of the U.S. Table of Frequency Allocations set forth in Section 2.106 of the FCC's rules will facilitate the continued in-orbit testing of Intelsat 19, which is a critical step in ensuring that the satellite will be fully operational at 166.0° E.L. The subsequent drift of the satellite to 166.0° 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 extension request.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "S. Crandall", written in a cursive style.

Susan H. Crandall
Assistant General Counsel
Intelsat Corporation

cc: Robert Nelson
Karl Kensinger
Kathryn Medley
Stephen Duall
Jay Whaley