

Before the
Federal Communications Commission
Washington, DC 20554

In the Matter of

Intelsat License LLC

Application to Modify Authorization for
Intelsat 10 (S2382)

File No. SAT-MOD- _____

**APPLICATION OF INTELSAT LICENSE LLC
TO MODIFY AUTHORIZATION FOR INTELSAT 10**

Intelsat License LLC (“Intelsat”), pursuant to Section 25.117 of the rules of the Federal Communications Commission (“Commission” or “FCC”), 47 C.F.R. § 25.117, hereby seeks to modify the authorization for the Intelsat 10 (call sign S2382) satellite. Specifically, this modification seeks permanent authority to operate the satellite at 47.5° E.L in the C- and Ku-bands pursuant to the ITU filings of the German Administration.¹

In accordance with the requirements of the Commission’s rules,² this application has been filed electronically as an attachment to FCC Form 312. Intelsat provides the technical information relating to the proposed modification on Schedule S and in narrative form, as

¹ Intelsat incorporates herein by reference the description of Europe*Star Gesellschaft Fur Satellitenkommunikation mbH (“Europe*Star”), the entity that holds the authorization to operate at 47.5° E.L., set forth on page 2 of its STA request, File No. SAT-STA-20110715-00129. Intelsat further incorporates by reference the New Slot Usage Agreement between Europe*Star and PanAmSat Europe, as well as Europe*Star’s authorization from the German Administration to operate at the 47.5° E.L. orbital location, that previously were filed with the FCC. See *Policy Branch Information; Actions Taken*, Report No. SAT-00476, File No. SAT-STA-20061102-00128 (Oct. 12, 2007) (Public Notice) (granting STA request to drift Intelsat 601 from 63.65° E.L. to 47.5° E.L.).

² 47 C.F.R. § 25.117(c).

contained in the attached Engineering Statement, pursuant to Section 25.114 of the Commission's rules.³

I. REQUEST FOR PERMANENT AUTHORITY TO OPERATE INTELSAT 10 AT 47.5° E.L.

By this modification application, Intelsat requests permanent authority to operate Intelsat 10 at 47.5° E.L.⁴ Pursuant to a grant of Special Temporary Authority, Intelsat commenced drifting Intelsat 10 on October 24, 2012⁵ from 68.5° E.L. to 47.5° E.L. and the satellite is now located at that location.⁶ Intelsat 10 is authorized, on a temporary basis, to provide Fixed-Satellite Service (FSS) at the 47.5° E.L. orbital location.⁷

The specific TT&C frequencies of the spacecraft are as follows:

Uplink:

14000.5 MHz (RHCP)
14499.5 MHz (H)

Downlink:

12747.5 MHz (H and RHCP)
12748.5 MHz (H and RHCP)

³ 47 C.F.R. § 25.114.

⁴ Intelsat 10 is currently licensed to operate on a permanent basis at 68.5° E.L. *See PanAmSat Licensee Corp. Application for Authority to Launch and Operate a Replacement Hybrid Fixed-Satellite Service Space Station at 68.5 E.L. Known as PAS-24*, 16 FCC Rcd 13145, File Nos. SAT-LOA-19991119-00112, SAT-STA-20010608-00049, and SAT-STA-20010627-00059 (2001). It has been replaced at that location by the Intelsat 20 satellite (call sign S2847).

⁵ *See* Letter from Susan H. Crandall, Intelsat, to Marlene H. Dortch, FCC, File No. SAT-STA-20120925-00155 (filed Oct. 24, 2012).

⁶ Intelsat 709 (call sign S2396) was licensed to operate at 47.5° E.L. *See Policy Branch Information; Actions Taken*, Report No. SAT-00905, File No SAT-MOD-20120605-00094 (Oct. 19, 2012). However, Intelsat 709 was recently de-orbited.

⁷ *See Policy Branch Information; Actions Taken*, Report No. SAT-00919, File No. SAT-STA-20121022-00186 (Oct. 22, 2012).

Set forth below is a chart of the communications frequencies on Intelsat 10, as well as the frequencies Intelsat 709 operated on at 47.5° E.L.⁸:

Frequency Band	Intelsat 10	Intelsat 709
3700-4200 MHz	√	√
5925-6425 MHz	√	√
10950-11200 MHz		√
11450-11700 MHz	√	√
12250-12500 MHz	√	
12500-12750 MHz	√	√
14000-14500 MHz	√	√

Intelsat 10 operates on all of the same frequencies the Intelsat 709 satellite operated on except for the 10950-11200 MHz band. In addition, Intelsat 10 operates in the 12250-12500 MHz band, which was not used at the 47.5° E.L. location by Intelsat 709.

II. PUBLIC INTEREST SHOWING

Grant of this modification application will serve the public interest because it will allow Intelsat to meet customer demand at 47.5° E.L. Moreover, grant of this modification will not result in an increased risk of harmful interference. At 47.5° E.L., Intelsat will operate the communications payload in conformance with Germany’s coordination agreements related to that location or on a non-interference, non-protected basis.

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. Intelsat 10 will not be located at the same orbital location as another satellite or at any orbital location that has an overlapping station-keeping volume with Intelsat 10 at 47.5° E.L.⁹ 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 10 at 47.5° E.L. Intelsat

⁸ Intelsat 709 also had the capability to utilize the 11.70 – 11.95 GHz band; however, Intelsat did not utilize this frequency band at 47.5° E.L.

⁹ The Yahsat-1B satellite is located at 47.6° E.L.

is also not aware of any system with an overlapping station-keeping volume with Intelsat 10 at 47.5° E.L. that is the subject of an ITU filing and that is either in orbit or progressing towards launch.

III. REQUEST FOR TECHNICAL WAIVER

As described in the attached Engineering Statement, Intelsat requests waiver, to the extent necessary, of Sections 25.114(d)(14)(ii) and 25.283(c) of the Commission's rules, which require that spacecraft are able to vent all pressurized systems at end of life. Under Section 1.3 of the Commission's rules, the Commission has authority to waive its rules "for good cause shown."¹⁰ Good cause exists if "special circumstances warrant a deviation from the general rule and such deviation will serve the public interest" better than adherence to the general rule.¹¹ In determining whether waiver is appropriate, the Commission should "take into account considerations of hardship, equity, or more effective implementation of overall policy."¹² As shown below, there is good cause for the requested waiver.

Sections 25.114(d)(14)(ii) and 25.283(c) of the Commission's rules require an applicant to demonstrate that all stored energy will be vented at the spacecraft's end of life.¹³ Intelsat 10 is a Boeing model 601HP spacecraft that is not designed to vent all pressurized systems. The Intelsat 10 satellite has two helium tanks with a total pressure of 1200 KPa. The pressurant that was used during orbit raising was permanently isolated from the propulsion system by firing a pyrotechnic valve at beginning of on-orbit life such that the residual gas (about 5%) cannot be vented at end of life.

¹⁰ 47 C.F.R. § 1.3; *WAIT Radio v. FCC*, 418 F.2d 1153, 1159 (D.C. Cir. 1969).

¹¹ *Northeast Cellular Telephone Co. v. FCC*, 897 F.2d 1164, 1166 (D.C.Cir. 1990).

¹² *WAIT Radio*, 418 F.2d at 1159.

¹³ 47 C.F.R. §§ 25.114(d)(14)(ii) & 25.283(c).

Waiver is appropriate in this case because grant would not undermine the purpose of these rules, which is to reduce the risk of accidental explosion and post de-orbit debris. As explained on page 8 of the attached Engineering Statement, Intelsat will ensure that all active units on the Intelsat 10 satellite are turned off and that all propellant tanks are depleted. In addition, the satellite's manufacturer, Boeing, has designed the Intelsat 10 spacecraft so that risk of accidental explosion causing additional orbital debris is minimal. First, the risk of accidental explosions is minimized because the pressures will be very low at end of life of the satellite, especially after the spacecraft is powered down and the temperature in the tanks drops. Additionally, Boeing has designed the tanks so that they leak before they burst. If a leak were to occur, there would not be sufficient energy in the gas stream to damage structurally the spacecraft and generate debris. Moreover, a leak would not significantly perturb the satellite's orbit because the expulsion of the pressurant gas would cause the spacecraft to tumble and the change in the spacecraft's velocity (*i.e.*, the thrust) would be randomly distributed, with the resulting impact on the satellite orbit's apogee and perigee being very small.

Grant of the waiver is also supported on hardship grounds. The pressurant tank on the Intelsat 10 satellite was permanently sealed off following the completion of launch transfer orbit via a pyro valve, and consequently cannot be vented at the satellite's end-of-life. Intelsat 10 is an in-orbit spacecraft. As such, a design change cannot be accomplished at this time. Avoiding such hardship is particularly appropriate where, as here, the licensee acted in good faith. Specifically, the Intelsat 10 satellite was licensed, launched, and operational prior to adoption of

the rule requiring discharge of remaining fuel at end-of-life.¹⁴ Under these circumstances, good cause exists to waive Sections 25.114(d)(14)(ii) and 25.283(c).¹⁵

IV. REQUEST FOR GRANT WITHOUT MILESTONES OR A BOND

As noted above, Intelsat 10 will operate at 47.5 ° E.L. in the 12250-12500 MHz band, which was not utilized by Intelsat 709 at that location. Nevertheless, the Commission should grant this application without imposing milestones¹⁶ or a bond.¹⁷ Because Intelsat 10 already is in-orbit and operating, all milestones for this satellite have been satisfied and Intelsat is not required to post a bond.¹⁸ Indeed, the Commission has granted similar applications for in-orbit satellites without imposing milestones or a bond.¹⁹

¹⁴ The Commission granted Intelsat's predecessor PanAmSat authority to launch the Intelsat 10 satellite on July 3, 2001 and the satellite in fact was launched and began operations in mid-2001. *See PanAmSat Licensee Corp. Application for Authority to Launch and Operate a Replacement Hybrid Fixed-Satellite Service Space Station at 68.5 E.L. Known as PAS-24*, 16 FCC Rcd 13145, File Nos. SAT-LOA-19991119-00112, SAT-STA-20010608-00049, and SAT-STA-20010627-00059 (2001). The Commission's orbital debris mitigation rule requiring discharge of all propellant, Section 25.283(c), was not adopted until three years later in an order released June 21, 2004, *Mitigation of Orbital Debris*, Second Report and Order, 19 FCC Rcd 11567 (2004), that became effective October 12, 2004. *Mitigation of Orbital Debris*, 69 Fed. Reg. 54581-54589 (Sept. 9, 2004).

¹⁵ The FCC has previously waived Section 25.283(c) of its rules when the action taken to seal the tank was taken prior to the adoption of this rule, and compliance would require direct retrieval of the spacecraft. *See, e.g., Intelsat North America LLC, Application to Modify Authorization for Intelsat 801 (S2391)*, File Nos. SAT-MOD-20100208-00024, SAT-AMD-20100920-00196, SAT-AMD-20100316-00050 (grant stamp with conditions Sept. 23, 2010).

¹⁶ 47 C.F.R. § 25.164(a).

¹⁷ 47 C.F.R. § 25.165.

¹⁸ *See Loral Skynet Network Services, Inc.*, 21 FCC Rcd 14,365 (Int'l Bur. 2006) ("Because Telstar 18 is in-orbit and operating, Loral is not required to post a bond.").

¹⁹ *See Application of PanAmSat Licensee Corp. to Modify Authorization for Galaxy 11*, File No. SAT-MOD-20080225-00051 (stamp grant July 22, 2008); *PanAmSat Licensee Corp., Application to Modify Authorization to Relocate Intelsat 5 to 169.0° E.L.*, File No. SAT-MOD-20080725-00150 (stamp grant Oct. 17, 2008). To the extent necessary, Intelsat requests waiver of Sections 25.164(a) and 25.165 of the rules, 47 C.F.R. §§ 25.164(a) and 25.165, for any possible milestone or bond associated with the operation of Intelsat 10 in the 12250-12500 MHz

V. 11450-11700 GHZ AND 12250-12750 GHZ FREQUENCY BANDS

Intelsat understands that operations in the 11450-11700 GHz and 12250-12750 GHz frequency bands are subject to certain limitations and obligations, which Intelsat accepts and will fulfill. Specifically, for operations in the 11450-11700 GHZ, Intelsat accepts the following conditions:

- Operations in the 11.45-11.7 GHz frequency band shall comply with footnote US211 to the United States Table of Frequency Allocations, 47 C.F.R. § 2.106, US211, which urges applicants for airborne or space station assignments to take all practicable steps to protect radio astronomy observations in the adjacent bands from harmful interference, consistent with footnote US74.
- Operations in the 11.45-11.7 GHz frequency band are limited to international operations in accordance with footnote NG 104 to the United States Table of Frequency Allocations, 47 C.F.R. § 2.106, NG 104, and footnote 2 of Section 25.202(a)(1) of the Commission's rules, 47 C.F.R. § 25.202(a)(1).

For operations in the 12250-12700 GHz frequency band, Intelsat accepts the following condition:

- Use of the 12.25-12.70 GHz frequency band is not authorized in International Telecommunication Union (ITU) Region 2.

For operations in the 12700-12750 GHz frequency band, Intelsat accepts the following condition:

- Use of the 12.70-12.75 GHz frequency band is not authorized for FSS in the space-to-Earth direction in ITU Region 2.

VI. CONCLUSION

For the reasons set forth above, Intelsat respectfully requests that the Commission grant this modification application.

band at 47.5° E.L. In this case, there is no risk of warehousing because the Intelsat 10 satellite is already in-orbit and will be able to provide service from the 47.5° E.L. location in a much more timely manner than the five years that would be allowed to an applicant intending to construct, launch, and operate a new satellite at this location.

Respectfully submitted,

Intelsat License LLC

By: /s/ Susan H. Crandall

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Exhibit A
FCC Form 312, Response to Question 34: Foreign Ownership

The Commission previously approved foreign ownership in Intelsat License LLC (“Intelsat”), in the *Intelsat-Serafina Order*.²⁰ In December 2009 and October 2011, the Commission also approved *pro forma* changes in Intelsat’s foreign ownership.²¹ There have been no other material changes to Intelsat’s foreign ownership since the date of the *Intelsat-Serafina Order*.

²⁰ *Intelsat Holdings, Ltd. and Serafina Holdings Limited, Consolidated Application for Consent to Transfer of Control of Holders of Title II and Title III Authorizations, Memorandum Opinion and Order*, 22 FCC Rcd 22,151 (2007).

²¹ *See Intelsat North America LLC, Intelsat LLC, PanAmSat Licensee Corp., PanAmSat H-2 Licensee Corp., and Intelsat New Dawn Company, Ltd., Applications for Pro Forma Transfer of Control*, File Nos. SAT-T/C-20091125-00128, SAT-T/C-20091125-00124, SAT-T/C-20091125-00127, SAT-T/C-20091125-00125, SAT-T/C-20091125-00126, SES-T/C-20091125-01505, SES-T/C-20091125-01502, SES-T/C-20091125-01506, SES-T/C-20091125-01504 and SES-T/C-20091125-01503 (granted Dec. 3, 2009); *Intelsat Application for Pro Forma Transfer of Control*, File Nos. SAT-T/C-20110810-00160, SAT-T/C-20110811-00161, SES-T/C-20110811-00948, SES-T/C-20110812-00963 (granted Oct. 13, 2011), and 0004825139 (granted Oct. 19, 2011).

Exhibit B
FCC Form 312, Response to Question 36: Cancelled Authorizations

Intelsat License LLC (“Intelsat”) has never had an FCC license “revoked.” However, on June 26, 2000, the International Bureau “cancelled” two Ka-band satellite authorizations issued to a former Intelsat entity, PanAmSat Licensee Corp. (“PanAmSat”),²² based on the Bureau’s finding that PanAmSat had not satisfied applicable construction milestones.²³ In that same order, the Bureau denied related applications to modify the cancelled authorizations. PanAmSat filed an application for review of the Bureau’s decision, which the Commission denied, and subsequently filed an appeal with the United States Court of Appeals for the District of Columbia Circuit, which was dismissed in January 2003 at PanAmSat’s request. Notwithstanding the fact that the Bureau’s action does not seem to be the kind of revocation action contemplated by question 36, Intelsat is herein making note of the decision in the interest of absolute candor and out of an abundance of caution. In any event, the Bureau’s action with respect to PanAmSat does not reflect on Intelsat’s basic qualifications, which are well-established and a matter of public record.

²² All licenses previously held by PanAmSat Licensee Corp. have been assigned to Intelsat License LLC. See IBFS File Nos. SAT-ASG-20101203-00252 (granted Dec. 23, 2010), SES-ASG-20101203-0150 (granted Dec. 20, 2010), and SES-ASG-20101206-01502 (granted Dec. 20, 2010).

²³ See *PanAmSat Licensee Corp.*, Memorandum Opinion and Order, 15 FCC Rcd 18720 (IB 2000).

Exhibit C
FCC Form 312, Response to Question 40:
Officers, Directors, and Ten Percent or Greater Shareholders

The officers and directors/managers of Intelsat License LLC are as follows:

Officers:

Michael McDonnell, Chairman
Flavien Bachabi, Deputy Chairman
Michelle Bryan, Secretary
Simon Van De Weg, Director, Finance

Board of Managers:

Michael McDonnell
Flavien Bachabi
Michelle Bryan

The business address of all Intelsat License LLC officers and members of the Board of Managers is:

4 rue Albert Borschette
L-1246 Luxembourg

Intelsat License LLC is a Delaware limited liability company that is wholly owned by Intelsat Holdings License LLC, also a Delaware limited liability company. Intelsat License Holdings LLC is wholly owned by Intelsat Jackson Holdings S.A., a Luxembourg company. Intelsat Jackson Holdings S.A. is wholly owned by Intelsat (Luxembourg) S.A., a Luxembourg company. Intelsat (Luxembourg) S.A. is wholly owned by Intelsat S.A., a Luxembourg company. Intelsat S.A. is wholly owned by Intelsat Holdings S.A., a Luxembourg company. Intelsat Holdings S.A. is wholly owned by Intelsat Investment Holdings S.à r.l., a Luxembourg company. Intelsat Investment Holdings S.à r.l. is wholly owned by Intelsat Global Holdings S.A., a Luxembourg company. Each of these entities may be contacted at the following address: 4 rue Albert Borschette, L-1246 Luxembourg.

Intelsat Global Holding S.A.'s ownership was approved by the Commission as part of the *Intelsat-Serafina Order* and the recent Intelsat Pro Forma and is incorporated by reference. *See Intelsat Holdings, Ltd. and Serafina Holdings Limited, Consolidated Application for Consent to Transfer of Control of Holders of Title II and Title III Authorizations, Memorandum Opinion and Order, 22 FCC Rcd 22,151 (2007) ("Intelsat-Serafina Order"); Intelsat Application for Pro Forma Transfer of Control, File Nos. SAT-T/C-20110810-00160, SAT-T/C-20110811-00161, SES-T/C-20110811-00948, SES-T/C-20110812-00963 (granted Oct. 13, 2011), and 0004825139 (granted Oct. 19, 2011) ("Intelsat Pro Forma").* On May 16, 2012, the International Bureau granted an application to transfer control of Intelsat pursuant to a public offering of newly issued voting shares by Intelsat, subsequent voting share sales by current shareholders and possible private placements of newly issued voting shares. *In the Matter of Intelsat Global Holdings, S.A., Applications to Transfer Control of Intelsat Licenses and Authorizations from BC Partners Holdings Limited to Public Ownership, Order, DA 12-768 (rel. May 16, 2012).* This transaction has not yet been consummated.