

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

In the Matter of

Intelsat License LLC

Application for Authority to Drift to and Operate JCSAT-RA, an In-orbit Satellite, at 169.0° E.L.

File No. SAT-A/O- _____

**APPLICATION FOR AUTHORITY TO OPERATE JCSAT-RA,
AN IN-ORBIT SATELLITE, AT 169.0° E.L.**

Intelsat License LLC (“Intelsat”), pursuant to Section 25.114 of the Federal Communications Commission’s (“FCC” or “Commission”) rules,¹ hereby requests authority to drift to and operate JCSAT-RA, an in-orbit satellite, at the 169.0° E.L. orbital location. JCSAT-RA is a non-common carrier C- and Ku-band satellite that Intelsat will take control over pursuant to a commercial agreement with its owner, SKY Perfect JSAT Corporation (“JSAT”). Intelsat expects to have the satellite on station at 169.0° E.L. in the second quarter of 2017, where it will be collocated with Intelsat 8 (call sign S2460) and Intelsat 805 (call sign S2404). JCSAT-RA will ensure station-kept service continuity until Horizons 3e (call sign S2947) is launched to replace Intelsat 8 and Intelsat 805.

As demonstrated below, Intelsat is legally and technically qualified to operate JCSAT-RA as proposed. Moreover, there is good cause for waiver of certain limited technical

¹ 47 C.F.R. § 25.114.

requirements. Grant of this application will serve the public interest by ensuring service continuity and adding new capacity at the nominal 169° E.L. location. In accordance with the Commission's requirements,² this application has been filed electronically as an attachment to FCC Form 312 and Schedule S.

I. BACKGROUND AND PROPOSED OPERATIONS

JCSAT-RA was launched on August 21, 2009, and is currently located at 128° E.L. Japan is the current licensing administration of the JCSAT-RA satellite. Pursuant to a commercial agreement between Intelsat and JSAT, Intelsat will acquire control of JCSAT-RA from JSAT once the satellite leaves the 128° E.L. station-keeping box, which is currently expected to be sometime in January 2017. Intelsat seeks U.S. licensing authority to drift JCSAT-RA to, and operate the satellite at, 169.0° E.L. in order to ensure continuity of service for existing customers. JSAT has informed the Japanese regulator that the satellite will be re-flagged to U.S. licensing. Intelsat expects JCSAT-RA to remain at 169.0° E.L. until the arrival of Horizons 3e, currently expected to be in the first quarter of 2019.

Currently, Intelsat 8 and Intelsat 805 are providing service at the nominal 169° E.L. orbital location.³ Intelsat intends to launch Horizons 3e in the third quarter of 2018 to replace both Intelsat 8 and Intelsat 805 at the nominal 169° E.L. orbital location.⁴ To bridge any gaps in

² 47 C.F.R. § 25.114(c).

³ Intelsat 8 is authorized to operate at 168.9° E.L. *See Policy Branch Information; Actions Taken*, Report No. SAT-01139, File No. SAT-MOD-20151021-00073 (Feb. 26, 2016) (Public Notice). Intelsat 805 is authorized to operate at 169.0° E.L. *See Policy Branch Information; Actions Taken*, Report No. SAT-01139, File Nos. SAT-MOD-20151020-00072 and SAT-AMD-20151120-00077 (Feb. 26, 2016) (Public Notice).

⁴ *Horizons-3 License LLC, Application for Authority to Launch and Operate Horizons 3e, a Replacement Satellite with New Frequencies, at 169.0° E.L.*, File No. SAT-LOA-20151202-00080 (filed Dec. 2, 2015) (“*Horizons 3e Application*”).

service that might otherwise occur between the retirement or start of inclined orbit operation of Intelsat 8 and Intelsat 805 and the arrival of Horizons 3e, JCSAT-RA will be collocated with Intelsat 8 and Intelsat 805. Intelsat seeks authority to begin drifting JCSAT-RA from the 128° E.L. orbital location in January 2017, and anticipates that the satellite will be operational at 169.0° E.L. by the second quarter of 2017. The end of service life of JCSAT-RA is estimated to be the end of 2024.

The chart below illustrates the frequencies that will be used by JCSAT-RA and Horizons 3e, as well as the frequencies that currently are used by the Intelsat 8 and Intelsat 805 satellites, at the nominal 169° E.L. orbital location.

	Intelsat 8	Intelsat 805	Horizons 3e	JCSAT-RA
3400-3700 MHz		✓		
3700-3940 MHz	✓	✓	✓	
3940-4200 MHz	✓	✓	✓	✓
5850-5925 MHz		✓		
5925-6225 MHz	✓	✓	✓	
6225-6425 MHz	✓	✓	✓	✓
6425-6485 MHz		✓		✓
6485-6650 MHz		✓		
10850-11700 MHz			✓	
12200-12250 MHz			✓	✓
12250-12500 MHz	✓		✓	✓
12500-12750 MHz	✓	✓	✓	✓
12920-13250 MHz			✓	
13750-13997 MHz			✓	✓
13997-14000 MHz	✓ ⁵		✓	✓
14000-14250 MHz	✓	✓	✓	✓
14250-14500 MHz	✓		✓	✓

⁵ Included for the purpose of authorizing Intelsat 8's use of the 13998.0 MHz command link.

JCSAT-RA contains new frequencies at 12200-12250 MHz and 13750-13997 MHz that are not currently on either Intelsat 8 or Intelsat 805. As Intelsat explains in its pending application, Horizons 3e will operate in both of these frequency bands in addition to two other new frequency bands.⁶ Intelsat has – in the Horizons 3e application – already requested the United States make ITU filings for the new frequency bands, including the 12200-12250 MHz and 13750-13997 MHz bands.

II. INTELSAT IS QUALIFIED TO HOLD THE AUTHORIZATION REQUESTED HEREIN

A. Legal Qualifications

Intelsat is legally qualified to hold the space station authorization requested in this application. The information provided in the attached Form 312 demonstrates Intelsat's compliance with the Commission's basic legal qualifications.⁷ In addition, Intelsat already holds multiple Commission satellite licenses, and its legal qualifications are a matter of record before the Commission.⁸

⁶ *Horizons 3e Application*, Legal Narrative at 8.

⁷ Because JCSAT-RA, like all other satellites licensed to Intelsat, will operate on a non-common carrier basis, Section 310(b) is not applicable to this license. *See Applications of The News Corp. Ltd. and The DIRECTV Group, Inc. (Transferors) and Constellation, LLC, Carlyle PanAmSat I, LLC, Carlyle PanAmSat II, LLC, PEP PAS, LLC and PEOP PAS, LLC (Transferees) for Authority to Transfer Control of PanAmSat Licensee Corp.*, Public Notice, 19 FCC Rcd 15424, 15425 n.5 (Int'l Bur. 2004).

⁸ *See Constellation, LLC, Carlyle PanAmSat I, LLC, Carlyle PanAmSat II, LLC, PEP PAS, LLC, and PEOP PAS, LLC, Transferors and Intelsat Holdings, Ltd., Transferee, Consol. Application for Authority to Transfer Control of PanAmSat Licensee Corp. and PanAmSat H-2 Licensee Corp.*, Memorandum Opinion and Order, 21 FCC Rcd 7368, 7381 (¶ 23) (2006) (“The Commission previously has determined that PanAmSat and Intelsat are qualified to hold licenses.”).

B. Technical Qualifications

As demonstrated in the attached Form 312, Schedule S, and Engineering Statement, Intelsat is technically qualified to hold the authorization requested herein. Specifically, Intelsat provides the information required by Section 25.114 of the Commission's rules.⁹ In addition, Intelsat's Engineering Statement provides information on compliance with the Commission's orbital debris mitigation rules.¹⁰

III. REQUEST FOR TECHNICAL WAIVERS

Intelsat requests a waiver of Sections 2.106 and 25.202(a)(1) of the Commission's rules to enable JCSAT-RA to use the 12200-12750 MHz band to provide downlink fixed satellite services ("FSS"). In addition, Intelsat requests a waiver of Section 25.210(a)(3), which requires that FSS satellites providing domestic service in the conventional C-band have the ability to switch polarization sense upon ground command, and Section 25.210(i)(1), which requires FSS satellites to achieve antenna cross-polarization isolation such that the ratio of the on-axis co-polar gain to the on-axis cross-polar gain of the antenna in the assigned frequency band be at least 30 dB within its primary coverage area.

Under Section 1.3 of the Commission's rules, the Commission has authority to waive its rules "for good cause shown."¹¹ 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

⁹ This application is filed pursuant to the modified Part 25 rules, which Intelsat understands the FCC will apply to pending applications as soon as these rules become effective. *See Comprehensive Review of Licensing and Operating Rules for Satellite Services, Second Report and Order*, 30 FCC Rcd 14713, 14825 ¶ 363 (2015) ("*Part 25 Second Report and Order*").

¹⁰ *See* Engineering Statement at 5-7; *Mitigation of Orbital Debris, Second Report and Order*, 19 FCC Rcd 11567 (2004).

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

the general rule.¹² In determining whether a waiver is appropriate, the Commission should “take into account considerations of hardship, equity, or more effective implementation of overall policy.”¹³ As shown below, there is good cause for each of the requested technical waivers.

A. Sections 2.106 and 25.202(a)(1)

Intelsat requests waiver of Sections 2.106 and 25.202(a)(1) of the Commission’s rules to the extent necessary to allow Intelsat to provide downlink FSS in the 12200-12750 MHz band. In the U.S. Table of Frequency Allocations, the 12200-12700 MHz band is allocated to fixed service (“FS”) and broadcasting-satellite service (“BSS”) and the 12700-12750 MHz frequency band is allocated to FS, Mobile Service (“MS”) and FSS (Earth-to-space).¹⁴ Section 25.202(a)(1) allocates the 12700-12750 MHz frequency band for Earth-to-space FSS transmissions.¹⁵ JCSAT-RA will operate in the 12200-12700 MHz and 12700-12750 MHz frequency bands in the space-to-Earth direction, which is in accordance with the Region 3 allocation.¹⁶

The FCC has previously granted waivers to Intelsat 8 and Intelsat 805 to provide service in the 12250-12750 MHz bands and 12500-12750 MHz bands, respectively, at the nominal 169° E.L. orbital location.¹⁷ Good cause exists to grant a waiver here because, just as the Commission recognized with respect to Intelsat 8 and Intelsat 805, JCSAT-RA is unlikely to cause harmful

¹² *Northeast Cellular Telephone Co. v. FCC*, 897 F.2d 1164, 1166 (D.C. Cir. 1990).

¹³ *WAIT Radio*, 418 F.2d at 1159.

¹⁴ 47 C.F.R. § 2.106.

¹⁵ 47 C.F.R. § 25.202(a)(1).

¹⁶ *See* 47 C.F.R. § 2.106.

¹⁷ *See Policy Branch Information; Actions Taken*, Report No. SAT-00987, File No. SAT-MOD-20130830-00110 (Dec. 20, 2013) (Public Notice); *Intelsat License LLC, Request for Special Temporary Authority to Drift Intelsat 805 to, and Operate at, 169.0° E.L.*, File No. SAT-STA-20151002-00068, at 1-2 (stamp grant Nov. 25, 2015).

interference to existing or future users operating in accordance with the Table of Frequency Allocations in International Telecommunications Union (“ITU”) Region 2 and the Commission’s rules.¹⁸

First, the operations of JCSAT-RA will not cause harmful interference in the 12200-12700 MHz band. Operating at 169.0° E.L., JCSAT-RA will operate at least 15.8° away from—and with no risk of providing harmful interference to—the nearest BSS network that could service any portion of ITU Region 2 pursuant to the ITU Region 2 BSS Plan.¹⁹ Terrestrial systems operating within the United States will not be subjected to harmful interference because JCSAT-RA’s transmissions in the band will comply with ITU power flux-density (“PFD”) limits.²⁰

Second, JCSAT RA’s operations in the 12700-12750 MHz band will not cause harmful interference. Intelsat will protect terrestrial stations by complying with ITU PFD limits. Additionally, Intelsat will operate in these frequencies in Region 2 on a non-protected basis and will therefore not claim protection from interference caused by an FSS earth station operating in that region.

Good cause therefore exists to waive Sections 2.106 and 25.202(a)(1) with respect to JCSAT-RA’s operations in the 12200-12750 MHz band because waiver will not result in

¹⁸ See *Intelsat License LLC, Application to Modify Authorization for Intelsat 8 (S2460)*, File Nos. SAT-MOD-20120619-00100 & SAT-AMD-20120815-00131, at 2-3 (stamp grant Aug. 9, 2013); *Intelsat License LLC, Request for Special Temporary Authority to Drift Intelsat 805 to, and Operate at, 169.0° E.L.*, File No. SAT-STA-20151002-00068, at 1-2 (stamp grant Nov. 25, 2015).

¹⁹ Under the ITU Region 2 BSS Plan, no BSS system may occupy a nominal orbital position further west than 175.2° W.L. in the 12200-12700 MHz band or further east than 54° W.L. in the 12500-12700 MHz band or 44° W.L. in the 12200-12500 MHz band. International Telecommunication Union, Radio Regulations, Appendix 30, Annex 7 (2012).

²⁰ See Engineering Statement at 4.

harmful interference to or otherwise adversely affect any other operator. Moreover, waiver will enable Intelsat to maintain continuity of service for existing customers in the time period between the retirement or start of inclined orbit operation of Intelsat 8 and Intelsat 805 and the arrival of Horizons 3e. The requested waiver is in the public interest because it allows Intelsat to continue providing a high level of service without causing harmful interference.

B. Sections 25.210(a)(3) and 25.210(i)(1)

Intelsat also requests a waiver of Sections 25.210(a)(3) and 25.210(i)(1) of the Commission's rules, which govern antenna polarization requirements for FSS satellites. There is good cause to waive both of these requirements because the Commission recently eliminated Sections 25.210(a)(3) and 25.210(i)(1) in the Part 25 streamlining proceeding.²¹ The Commission's December Second Report and Order, however, is not yet effective. Given that the Commission has concluded that these rule provisions no longer serve the public interest, waiver of their requirements is warranted.

IV. REQUEST FOR GRANT WITHOUT MILESTONES OR A BOND

To the extent necessary, Intelsat requests a waiver of Sections 25.164(a) and 25.165²² of the rules for any possible milestone or bond associated with the operation of the 12200-12250 MHz and 13750-13997 MHz frequency bands, which are on JCSAT-RA, but are not currently authorized for operation by either Intelsat 8 or Intelsat 805. Intelsat understands that when the modified milestone and bond requirements adopted in the Part 25 Second Report and Order

²¹ *Part 25 Second Report and Order* at 14817, ¶ 333.

²² 47 C.F.R. §§ 25.164(a) and 25.165.

come into force, the FCC will apply them to pending space station applications, such as this one.²³

The Commission should grant this application without imposing a bond because there is no risk of warehousing.²⁴ Because JCSAT-RA already is in orbit and operating, all milestones for this satellite have been satisfied and Intelsat should not be required to post a bond. Indeed, JCSAT-RA will be able to provide service from the 169.0° 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.²⁵ Moreover, warehousing is clearly not a concern in this case given that, as its pending application demonstrates, Horizons 3e also will use the 12200-12250 MHz and 13750-13997 MHz frequency bands.²⁶ The Commission has granted similar applications for in-orbit satellites without imposing milestones or a bond, and accordingly should do the same here.²⁷

²³ See *supra* note 9.

²⁴ See *Amendment of the Commission's Space Station Licensing Rules and Policies*, First Report and Order and Further Notice of Proposed Rulemaking, 18 FCC Rcd 10760, ¶ 170 (2003) (“By making the bond payable upon failure to meet any milestone . . . we further strengthen our protections against speculation and warehousing.”).

²⁵ See *Loral Skynet Network Services, Inc.*, 21 FCC Rcd 14365 (Int’l Bur. 2006) (“Because Telstar 18 is in-orbit and operating, Loral is not required to post a bond.”).

²⁶ *Horizons 3e Application*, Legal Narrative at 8.

²⁷ 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).

V. GRANT OF THIS APPLICATION WILL SERVE THE PUBLIC INTEREST

The authorization requested herein will serve the public interest by ensuring continuity of service and providing additional capacity in the United States and Asia Pacific region from the nominal 169° E.L. orbital location until the arrival of Horizons 3e.

VI. USE OF THE 13750-14000 MHZ FREQUENCY BAND

Intelsat understands that operations in the 13750-14000 MHz frequency bands are subject to certain limitations and obligations, which Intelsat accepts and will fulfill. For operations in this band, Intelsat accepts the following conditions:

- In the 13750-14000 MHz band (Earth-to-space), receiving space stations in the fixed-satellite service shall not claim protection from radiolocation transmitting stations operating in accordance with the United States Table of Frequency Allocations.
- Pursuant to footnote US337 of the United States Table of Frequency Allocations, 47 C.F.R. § 2.106, any earth station in the United States and its possessions communicating with the JCSAT-RA space station in the 13750-13800 MHz band (Earth-to-space) is required to coordinate through National Telecommunications and Information Administration's ("NTIA") Interdepartment Radio Advisory Committee's ("IRAC") Frequency Assignment Subcommittee ("FAS") to minimize interference to the National Aeronautics and Space Administration Tracking and Data Relay Satellite System, including manned space flight.
- Operations of any earth station in the United States and its possessions communicating with the JCSAT-RA space station in the 13750-14000 MHz band (Earth-to-space) shall comply with footnote US356 to United States Table of Frequency Allocations, 47 C.F.R. § 2.106, US356 which specifies a mandatory minimum antenna diameter of 4.5 meters and a non-mandatory minimum and maximum equivalent isotropically radiated powers ("e.i.r.p."). Operations of any earth station located outside the United States and its possessions communicating with the JCSAT-RA space station in the 13750-14000 MHz band (Earth-to-space) shall be consistent with footnote 5.502 to the ITU Radio Regulations, which allows a minimum antenna diameter of 1.2 meters for earth stations of a geostationary satellite orbit network and specifies mandatory power limits.
- Operators of earth stations accessing the JCSAT-RA space station in the 13750-14000 MHz band are encouraged to cooperate voluntarily with the National Aeronautics and Space Administration ("NASA") in order to facilitate continued operation of NASA's Tropical Rainfall Measuring Mission ("TRMM") satellite.

VII. ORBITAL DEBRIS STATEMENT

Intelsat has assessed and limited the probability of the JCSAT-RA space station becoming a source of debris as a result of collision with large debris or other operational space stations at 169.0° E.L. When the drift of JCSAT-RA is completed, Intelsat 8 will be operating at 168.9° E.L and Intelsat 805 will be operating at 169.0° E.L. JCSAT-RA and Intelsat 805 will operate co-located at 169.0° E.L until traffic transition is complete, at which time Intelsat 805 is expected, subject to receipt of FCC approval, to be moved to 169.1° E.L. Once launched, Horizons 3e will operate at 169.0° E.L. While these satellites are nominally collocated with JCSAT-RA, Intelsat will ensure that sufficient spatial separation is achieved between these two satellites through the use of orbit eccentricity and inclination offsets and thus minimize the risk of collision.

With the exception of Intelsat 805 and Horizons 3e for the purpose of traffic transition, JCSAT-RA 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 JCSAT-RA at 169.0° E.L. Finally, Intelsat is not aware of any system with an overlapping station-keeping volume with JCSAT-RA at 169.0° E.L. that is the subject of an ITU filing and that is either in orbit or progressing toward launch.

Intelsat expects to operate JCSAT-RA at 169.0° E.L. until the arrival of Horizons 3e. Although plans for JCSAT-RA post the arrival of Horizons 3e are not yet known, to the extent that Intelsat License LLC remains the licensee of JCSAT-RA at the end of the satellite's maneuver life, Intelsat will dispose of the spacecraft by moving it to an altitude above the

altitude established by the Inter-Agency Space Debris Coordination Committee (“IADC”) formula. Intelsat has reserved 10.2 kilograms of hydrazine for this purpose.²⁸ In calculating the disposal orbit, Intelsat has used simplifying assumptions as permitted under the Commission’s Orbital Debris Report and Order.²⁹

VIII. CONCLUSION

In light of the foregoing, Intelsat respectfully requests that the Commission grant the authorization requested herein.

Respectfully submitted,

/s/ Susan H. Crandall

Susan H. Crandall
Associate General Counsel
Intelsat Corporation

Jennifer D. Hindin
Colleen King
WILEY REIN LLP
1776 K Street, N.W.
Washington, DC 20006

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²⁸ See Engineering Statement at 6.

²⁹ *Mitigation of Orbital Debris*, Second Report and Order, 19 FCC Rcd 11567 (2004).

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*.¹ In December 2009 and October 2011, the Commission also approved *pro forma* changes in Intelsat’s foreign ownership.² There have been no other material changes to Intelsat’s foreign ownership since the date of the *Intelsat-Serafina Order*.

¹ *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 22151 (2007).

² *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”),³ based on the Bureau’s finding that PanAmSat had not satisfied applicable construction milestones.⁴ 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.

³ 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).

⁴ 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:

Franz Russ, Deputy Chairman
Michelle Bryan, Secretary
Mirjana Hervy, Director, Finance

Board of Managers:

Franz Russ
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 License Holdings 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 Investments S.A., a Luxembourg company. Intelsat Investments 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 S.A., a Luxembourg company. Each of these entities may be contacted at the following address: 4 rue Albert Borschette, L-1246 Luxembourg.

Intelsat 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 22151 (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 change of control has not yet been fully consummated.