

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

In the Matter of

Intelsat License LLC

Application to Modify Authorization for  
Intelsat 904 (S2408)

File No. SAT-MOD- \_\_\_\_\_

**APPLICATION OF INTELSAT LICENSE LLC  
TO MODIFY AUTHORIZATION FOR INTELSAT 904**

Intelsat License LLC (“Intelsat”), pursuant to Section 25.117 of the rules of the Federal Communications Commission (“Commission” or “FCC”),<sup>1</sup> hereby seeks to modify the authorization for the Intelsat 904 satellite (Call Sign S2408). Specifically, this modification application seeks authority to relocate Intelsat 904 to, and operate the satellite at, 29.5° W.L. In addition, Intelsat seeks to extend the satellite’s license term and previously granted technical waiver through December 2024.<sup>2</sup>

In accordance with the requirements of the Commission’s rules,<sup>3</sup> this application has been filed electronically as an attachment to FCC Form 312. Pursuant to Section 25.114 of the

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<sup>1</sup> 47 C.F.R. § 25.117.

<sup>2</sup> Specifically, to the extent necessary, Intelsat seeks an extension of the previously granted waiver of 47 C.F.R. § 25.202(g). *See Policy Branch Information; Actions Taken*, Report No. SAT-01199, File No. SAT-MOD-20160805-00079 (Nov. 4, 2016) (Public Notice). Due to rule changes since the 2016 modification authorization, Intelsat does not seek waiver extension for the following Commission rules, which have been eliminated: 47 C.F.R. §§ 25.210(a)(1), (3); 25.210(i); and 25.211(a).

<sup>3</sup> 47 C.F.R. § 25.117(b), (c).

Commission's rules,<sup>4</sup> Intelsat provides the technical information relating to the proposed modification on Schedule S and in narrative form, as contained in the attached Engineering Statement.

Consistent with Section 1.62 of the Commission's rules,<sup>5</sup> Intelsat will continue to operate the Intelsat 904 satellite pursuant to the terms and conditions of its expiring license until such time as the Commission makes a determination with respect to this request.

#### **I. REQUEST TO RELOCATE INTELSAT 904 TO 29.5° W.L.**

Intelsat requests authority to drift Intelsat 904 to, and operate the satellite in inclined orbit at, 29.5° W.L.<sup>6</sup> Intelsat 904 is licensed to operate at 45.1° E.L.<sup>7</sup> and is currently drifting to 29.5° W.L. under Special Temporary Authority.<sup>8</sup> The drift is expected to take approximately six months.

During the drift of Intelsat 904, Intelsat will utilize only the satellite's telemetry, tracking, and command ("TT&C") frequencies and will follow industry practices for coordinating TT&C

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<sup>4</sup> 47 C.F.R. § 25.114.

<sup>5</sup> 47 C.F.R. § 1.62 (permitting continued operations by a licensee where there is a proper and timely pending application for renewal of the license).

<sup>6</sup> Intelsat 904 began inclined orbit operations in 2018. *See* Letter from Cynthia J. Grady, Senior Counsel, Intelsat US LLC, to Marlene H. Dortch, Secretary, Federal Communications Commission (Oct. 15, 2018).

<sup>7</sup> *See Policy Branch Information; Actions Taken*, Report No. SAT-01199, File No. SAT-MOD-20160805-00079 (Nov. 4, 2016) (Public Notice).

<sup>8</sup> *See, e.g., Policy Branch Information; Actions Taken*, Report No. SAT-01373, File No. SAT-STA-20190205-00005 (Feb. 22, 2019) (Public Notice).

transmissions during the relocation process. The satellite's specific TT&C frequencies are as follows: 6173.7 MHz and 6176.3 MHz in the uplink; and 3947.5 MHz, 3948.0 MHz, 3952.0 MHz, and 3952.5 MHz in the downlink.

Intelsat 901 (Call Sign S2405) is currently operating at 29.5° W.L.<sup>9</sup> and will be redeployed to 27.5° W.L. in 2019.<sup>10</sup> Once located at 29.5° W.L., Intelsat 904 will operate on the same communications frequencies as Intelsat 901, which it is replacing, as well as in two new frequency bands: 3625-3700 MHz and 5858-5925 MHz.<sup>11</sup> The frequencies for both Intelsat 904 and Intelsat 901 are identified in the chart below.

	<b>Intelsat 904</b>	<b>Intelsat 901<sup>12</sup></b>
3625-3700 MHz <sup>13</sup>	✓	
3700-4200 MHz	✓	✓
5850-5925 MHz <sup>13</sup>	✓	
5925-6425 MHz	✓	✓
10950-11200 MHz	✓	✓
11450-11700 MHz	✓	✓
14000-14500 MHz	✓	✓

<sup>9</sup> See *Policy Branch Information; Actions Taken*, Report No. SAT-01290, File No. SAT-MOD-20170831-00126 (Dec. 15, 2017) (Public Notice).

<sup>10</sup> See *Policy Branch Information; Space Station Applications Accepted for Filing*, Report No. SAT-01374, File No. SAT-MOD-20190207-00009 (Public Notice Mar. 1, 2019).

<sup>11</sup> Intelsat is currently seeking Special Temporary Authority to operate Intelsat 901 in the 3625-3700 MHz and 5850-5925 MHz bands at 29.5° W.L. See *Intelsat License LLC, Request for Special Temporary Authority to Operate Intelsat 901 at 29.5° W.L. with New Frequencies*, File No. SAT-STA-20190411-00027 (filed Apr. 11, 2019).

<sup>12</sup> Intelsat 901 is capable of operating in the 3625-3700 MHz and 5850-5925 MHz bands. However, Intelsat did not originally seek authority to operate in those bands at 29.5° W.L. See *Policy Branch Information; Actions Taken*, Report No. SAT-01290, File No. SAT-MOD-20170831-00126 (Dec. 15, 2017) (Public Notice).

<sup>13</sup> Intelsat requests that a new U.S. International Telecommunication Union (“ITU”) filing be made at 29.5° W.L. for operations in the 3625-3700 MHz and 5850-5925 MHz bands. See Engineering Statement at 5.

## **II. REQUEST FOR EXTENSION OF LICENSE TERM**

Intelsat seeks to extend the license term for the Intelsat 904 satellite through December 2024. Based on a license extension granted in 2016, the license term for Intelsat 904 will expire on December 31, 2019.<sup>14</sup> This expiration date is well before the expected end of service life of the satellite, which was most recently estimated to be the end of 2024. To the extent the satellite's projected end of service life is extended in the future, Intelsat will seek an additional extension of the license term.

## **III. PUBLIC INTEREST SHOWING**

Grant of this modification application to relocate and extend the license term of Intelsat 904 is in the public interest, because it will allow Intelsat to provide service continuity at the nominal 29.5° W.L. orbital location well beyond the current license term's December 31, 2019 expiration date.

Grant of this relocation request will not result in increased risk of harmful interference. As noted above, Intelsat will operate only at the above-listed TT&C frequencies during the drift and will coordinate its TT&C transmissions with operators of satellites in the drift path. Should any interference occur during the drift, Intelsat will take all reasonable steps to eliminate such interference. Once Intelsat 904 is on station at 29.5° W.L., Intelsat will operate the satellite's communications payload and TT&C frequencies in conformance with existing coordination agreements and the FCC's rules governing operations vis-à-vis adjacent locations. Moreover,

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<sup>14</sup> See *Policy Branch Information; Actions Taken*, Report No. SAT-01199, File No. SAT-MOD-20160805-00079 (Nov. 4, 2016) (Public Notice).

extension of the Intelsat 904 license term will not affect the satellite's post-mission disposal plan previously approved by the Commission.<sup>15</sup>

The Intelsat 904 satellite's subsystems and solar panels are functioning normally, and there are no single points of failure on Intelsat 904 that would result in an inability to de-orbit the satellite. Additionally, the satellite's TT&C functions are operating normally and most of the payload is operational. Extending the license term will enable Intelsat 904 to continue to serve customers, thereby promoting the efficient use of orbital resources. Grant is also consistent with prior decisions by the Commission to extend satellite license terms.<sup>16</sup>

#### **IV. WAIVER REQUESTS**

Intelsat requests waiver of Section 2.106, Footnote NG52 of the U.S. Table of Allocations, which restricts the use of the 10700-11700 MHz band by non-federal Fixed Satellite Service ("FSS") in the geostationary orbit to international systems only.<sup>17</sup> In addition, Intelsat requests continued waiver of Section 25.202(g), which requires operation of TT&C communications at the edge of assigned frequency bands.<sup>18</sup>

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<sup>15</sup> See *Policy Branch Information; Actions Taken*, Report No. SAT-01199, File No. SAT-MOD-20160805-00079 (Nov. 4, 2016) (Public Notice).

<sup>16</sup> See, e.g., *Policy Branch Information; Actions Taken*, Public Notice, Report No. SAT-01199, DA 16-1251, File Nos. SAT-MOD-20160805-00079, SAT-MOD-20160816-00084, and SAT-MOD-20160906-00088 (Nov. 4, 2016) (extending license terms of the Intelsat 904, Intelsat 902, and Intelsat 901 satellites, respectively).

<sup>17</sup> 47 C.F.R. § 2.106, n. NG52.

<sup>18</sup> See 47 C.F.R. § 25.202(g). See also *Policy Branch Information; Actions Taken*, Report No. SAT-01199, File No. SAT-MOD-20160805-00079 (Nov. 4, 2016) (Public Notice). Since the 2016 modification authorization, the FCC has rescinded Sections 25.210(a)(1) & (a)(3), 25.210(i), and 25.211(a). Accordingly, Intelsat requests only extension of the previously granted waiver for Section 25.202(g) to the extent necessary.

Under Section 1.3 of the Commission's rules, the Commission has authority to waive its rules "for good cause shown."<sup>19</sup> 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.<sup>20</sup> In determining whether waiver is appropriate, the Commission should "take into account considerations of hardship, equity, or more effective implementation of overall policy."<sup>21</sup> Additionally, a waiver of the Table of Allocations is generally granted "when there is little potential interference into any service authorized under the Table of Frequency allocations and when the nonconforming operator accepts any interference from authorized services."<sup>22</sup>

**A. U.S. Table of Frequency Allocations, Footnote NG52**

Good cause exists to waive the international-only requirements for the 10950-11200 MHz frequency band on Intelsat 904. The purpose of NG52 is to limit the number of the FSS earth stations with which the co-primary Fixed Service ("FS") station would need to coordinate.<sup>23</sup> The International Bureau has found that waiving NG52 would not undermine the

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<sup>19</sup> 47 C.F.R. § 1.3; *WAIT Radio v. FCC*, 418 F.2d 1153, 1159 (D.C. Cir. 1969).

<sup>20</sup> *Northeast Cellular Telephone Co. v. FCC*, 897 F.2d 1164, 1166 (D.C. Cir. 1990).

<sup>21</sup> *WAIT Radio*, 418 F.2d at 1159.

<sup>22</sup> See *The Boeing Company*, Order and Authorization, 16 FCC Rcd 22645, 22651 (2001); *Application of Fugro-Chance, Inc. for Blanket Authority to Construct and Operate a Private Network of Receive-Only Mobile Earth Stations*, Order and Authorization, 10 FCC Rcd 2860, 2860 (1995) (authorizing Mobile Satellite Service in the C-band). See also *Application of Motorola Satellite Communications, Inc. for Modification of License*, Order and Authorization, 11 FCC Rcd 13952, 13952-13956 (1996) (authorizing service to fixed terminals in bands allocated for mobile satellite service).

<sup>23</sup> See *Amendment of Part 2 of The Commission's Rules to Conform, to the Extent Practicable, with the Geneva Radio Regulations, as Revised by the Space WARC*, Geneva, Report and Order, 26 RR 2d 1257, ¶¶ 35-38 (1973). See also *EchoStar KuX Corporation Application for Authority to Construct, Launch and Operate a Geostationary Satellite Using the*

purpose of the rules, if the party seeking waiver: (1) will be utilizing earth stations that are receive-only in these bands and thus “not capable of causing interference into FS stations” operating in the bands; and (2) agrees to “accept any level of interference from FS stations” in these bands.<sup>24</sup>

With respect to the 10950-11200 MHz band, grant of the requested waiver satisfies these criteria and would be consistent with precedent.<sup>25</sup> The earth stations operating in this band on Intelsat 904 will not transmit, and Intelsat agrees to accept any level of interference into those earth stations from FS stations in the band. Intelsat will provide services in the 10950-11200 MHz frequency band in the United States and its territories only on a non-interference/non-protected basis. Accordingly, the earth stations operating in these bands pose no interference concerns with respect to co-frequency FS stations and therefore will not need to be coordinated with FS stations located within United States and its territories.

Intelsat also agrees to abide by customer notification requirements that the International Bureau has previously imposed when granting waivers of NG52.<sup>26</sup> Intelsat will inform its customers in writing, including any customers receiving end-user services from resellers accessing capacity on Intelsat 904, of the potential for interference from FS operations in the 10950-11200 MHz band.

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*Extended Ku-band Frequencies in the Fixed-Satellite Service at the 83° W.L. Orbital Location, Order and Authorization*, 20 FCC Rcd 919, ¶ 9 (2004) (“*EchoStar Order*”).

<sup>24</sup> *EchoStar Order*, ¶ 13 (waiving the international-only restriction for passive, receive-only earth station operations in the 11.45-11.7 GHz band).

<sup>25</sup> See, e.g., *DIRECTV Enterprises, LLC, Fleet Management Notice for SKY-B1 Satellite*, Stamp Grant, File No. SAT-MOD-20170221-00019, Condition 10 (May 11, 2017).

<sup>26</sup> See, e.g., *id.*; *Intelsat North America Request for Waiver*, Stamp Grant, File No. SAT-MOD-20050610-00122, Condition 3 (Sept. 30, 2005); *EchoStar 83° Waiver*, ¶ 13.

## **B. Extension of Previously Granted Technical Waiver**

Intelsat requests, to the extent necessary, that the technical waiver previously granted for Intelsat 904 continue to apply. Specifically, Intelsat requests continued waiver of Section 25.202(g), requiring TT&C communications at the edge of assigned frequency bands, for the reasons previously stated.<sup>27</sup>

## **V. INTELSAT ACCEPTS SECTION 316 PETITION CONDITIONS**

Intelsat understands and accepts that its license to operate Intelsat 904 at 29.5° W.L. will be conditioned as follows:

- Intelsat shall remain a signatory to the Public Services Agreement between Intelsat and the International Telecommunications Satellite Organization (“ITSO”) that was approved by the ITSO Twenty-Fifth Assembly of Parties, as amended.
- No entity shall be considered a successor-in-interest to Intelsat under the ITSO Agreement for licensing purposes unless it has undertaken to perform the obligations of the Public Services Agreement approved by the Twenty-Fifth Assembly of Parties, as amended.<sup>28</sup>

## **VI. 10950-11200 MHZ (10.95-11.2 GHZ) AND 11450-11700 MHZ (10.95-11.2 GHZ) FREQUENCY BANDS**

Intelsat understands that operations in the 10950-11200 MHz and 11450-11700 MHz frequency bands are subject to certain limitations and obligations, which Intelsat accepts and will fulfill. For operations in these frequency bands, Intelsat accepts the following condition:

- Intelsat’s use of the 10.95-11.2 GHz and 11.45-11.70 GHz bands (space-to-Earth) are subject to 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

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<sup>27</sup> See 47 C.F.R. § 25.202(g). See also *Policy Branch Information; Actions Taken*, Report No. SAT-01199, File No. SAT-MOD-20160805-00079 (Nov. 4, 2016) (Public Notice).

<sup>28</sup> See *Petition of the Int’l. Telecomms. Satellite Org. under Section 316 of the Commc’ns Act, as Amended*, Order of Modification, 23 FCC Rcd 2764, ¶¶ 11-13 (2008).



observations in the adjacent bands from harmful interference, consistent with footnote US74.

## **VII. MILESTONE AND BOND REQUIREMENTS**

Because Intelsat 904 is already in-orbit and operating, grant of this modification application is not subject to milestone conditions, and Intelsat is not required to post a bond under Sections 25.164(a) and 25.165 of the Commission's rules.<sup>29</sup>

## **VIII. CONCLUSION**

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

Respectfully submitted,

Intelsat License LLC

By: /s/ Susan H. Crandall

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<sup>29</sup> 47 C.F.R. §§ 25.164(a) and 25.165. *See Loral Skynet Network Services, Inc. Application for Authority to Provide Communication Services via the Telstar 18 Satellite from Loral's Fixed Earth Station in Kapolei, Hawaii, using the Conventional C-band Frequencies*, Order and Authorization, 20 FCC Rcd 11,856, ¶ 16 (2005) ("Because Telstar 18 is in-orbit and operating, Loral is not required to post a bond.").

## 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*.<sup>1</sup> In 2012, the International Bureau authorized the transfer of control of Intelsat.<sup>2</sup> There have been no other material changes to Intelsat’s foreign ownership since the date of the *Intelsat-Serafina Order*.

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<sup>1</sup> *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).

<sup>2</sup> *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, 27 FCC Rcd 5,226 (2012). The transfer of control was fully consummated on June 14, 2018. See Letter from Jennifer D. Hindin, Counsel for Intelsat, to Marlene H. Dortch, FCC, IB Docket No. 11-205 (filed June 14, 2018).

## **Exhibit B**

### **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:

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

Board of Managers:

Jacques Kerrest  
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 Ventures S.à r.l., a Luxembourg company, which is in turn wholly owned by Intelsat Alliance LP, a Delaware limited partnership. Intelsat Alliance LP is indirectly wholly owned by Intelsat Jackson Holdings S.A., a Luxembourg company. Intelsat Jackson Holdings S.A. is wholly owned by Intelsat Connect Finance S.A., a Luxembourg company, which in turn is wholly owned by Intelsat Envision Holdings LLC, a Delaware limited liability company. Intelsat Envision Holdings LLC 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, which in turn is wholly owned by Intelsat Holdings S.A., a Luxembourg company. Intelsat Holdings S.A. is wholly owned by 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 22,151 (2007) ("*Intelsat-Serafina Order*"); *Intelsat Application for Pro Forma Transfer of Control*, File Nos. SAT-T/C-20180627-00048, SAT-T/C-20180627-00049, SES-T/C-20180627-01430, SES-T/C-20180627-01436, SES-T/C-20180627-01433 (granted June 29, 2018), 0008216564 (granted June 28, 2018) and 0037-EX-TU-2018 (granted June 29, 2018).