

APPLICATION FOR EARTH STATION SPECIAL TEMPORARY AUTHORITY

APPLICANT INFORMATION Enter a description of this application to identify it on the main menu:  
STA - Paumalu, HI 19m Antenna (LEOP)

1. Applicant

|                   |  |                      |                            |
|-------------------|--|----------------------|----------------------------|
| <b>Name:</b>      | Inmarsat Hawaii Inc.                     | <b>Phone Number:</b> | 202-248-5155               |
| <b>DBA Name:</b>  |  | <b>Fax Number:</b>   | 202-248-5186               |
| <b>Street:</b>    | 1101 Connecticut Avenue NW<br>Suite 1200 | <b>E-Mail:</b>       | diane_cornell@inmarsat.com |
| <b>City:</b>      | Washington                               | <b>State:</b>        | DC                         |
| <b>Country:</b>   | USA                                      | <b>Zipcode:</b>      | 20036 -                    |
| <b>Attention:</b> | Diane J Cornell                          |                      |                            |



*with conditions*

File # SES-STA-20120301-00226

Call Sign KA25 Grant Date 4/4/2012  
(or other identifier)

Term Dates  
From 4/12/2012 To: 5/11/2012

Approved: Paul E. Black

Conditions:

Applicant: Inmarsat Hawaii Inc.

File Number: SES-STA-20120301-00226

Call Sign: KA25

Inmarsat Hawaii Inc. is granted Special Temporary Authority to provide telemetry, tracking and control ("TT&C") functions YahSat 1B spacecraft during its Launch and Early Orbit Phases (LEOP). This authorization is for 30 days, from April 12, 2012 through May 11, 2012 under the following conditions:

1. All operations shall be on an unprotected and non-harmful interference basis, i.e., Inmarsat Hawaii Inc shall not cause harmful interference to any other lawfully operating station.
2. In the event that there is a report of interference, Inmarsat Hawaii Inc must immediately terminate transmissions and notify the FCC in writing.
3. The LEOP operations will be coordinated with all operators of satellites that use the same frequency bands and are in the LEOP path. 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.

*with conditions*



File # SES - STA - 20120301 - 00226

Call Sign KA25 Grant Date 4/4/2012  
(or other identifier)

Term Dates  
From 4/12/2012 To: 5/11/2012

Approved: Paul E. Blaes

Pursuant to Section 25.137 of the Federal Communications Commission’s (“Commission” or “FCC”) rules, the same technical information required by Section 25.114 for U.S.-licensed space stations, and certain legal information, must be submitted by earth station applicants “requesting authority to operate with a non-U.S. licensed space station to serve the United States...”<sup>2</sup> Inmarsat Hawaii seeks authority to support the needed TTAC during the LEOP of the YahSat 1B spacecraft from shortly after launch to low earth and transfer orbits. Inmarsat Hawaii does not request authority to provide commercial service to the United States, and thus believes that Section 25.137 does not apply.

To the extent the Commission determines, however, that Inmarsat Hawaii’s request for authority to provide LEOP on a special temporary basis is a request to serve the United States with a non-U.S.-licensed satellite, Inmarsat Hawaii respectfully requests a waiver of Sections 25.137 and 25.114 of the Commission’s rules, to the extent that Inmarsat Hawaii has not herein provided the information required by these rules.<sup>3</sup> The Commission may grant a waiver for good cause shown.<sup>4</sup> A waiver is therefore appropriate if special circumstances warrant a deviation from the general rule, and such a deviation will serve the public interest.

In this case, good cause for a waiver of portions of Section 25.114 exists. Inmarsat Hawaii seeks authority only to conduct LEOP support for YahSat 1B. Thus, any information sought by Section 25.114 that is not relevant to the LEOP – e.g., antenna patterns, energy and propulsion and orbital debris – and Inmarsat Hawaii does not have such information. In addition, Inmarsat Hawaii would not easily be able to obtain such information because Inmarsat Hawaii is not the operator of the YahSat 1B satellite, nor is Inmarsat Hawaii in contractual privity with that operator. Rather, Inmarsat Hawaii has contracted with Astrium to support the LEOP portion of the campaign using a small portion of the C-band capacity of the satellite prior to its commercial operation.

As evidenced by Inmarsat Hawaii’s license for the 19m Antenna, Inmarsat Hawaii has the requisite authority to perform the LEOP of the YahSat 1B satellite, except for the point of communication. Moreover, as with any STA, Inmarsat Hawaii will conduct the operations on an unprotected, non-interference basis.

Because it is not relevant to the service for which Inmarsat Hawaii seeks authorization, and because obtaining the information would be a hardship, Inmarsat Hawaii seeks a waiver of all the technical and legal information required by Section 25.114, to the extent it is not provided herein. As noted above, Inmarsat Hawaii has provided the required information to the extent that it is relevant to the LEOP service for which Inmarsat Hawaii seeks authorization.

Good cause also exists to waive portions of Section 25.137, to the extent the information required is not herein provided. Section 25.137 is designed to ensure that “U.S.-licensed satellite systems have effective competitive opportunities to provide analogous services” in other countries. Here, there is no service being provided by the satellite; Inmarsat Hawaii is simply providing TTAC facilities while the satellite is in transfer orbit on the way to its final geostationary orbital location. Thus, the purpose of the information required by Section 25.137 is not implicated here. For example, Section 25.137(d) requires

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<sup>2</sup> 47 C.F.R. § 25.137(a).

<sup>3</sup> 47 C.F.R. §§25.137 and 25.114.

<sup>4</sup> 47 C.F.R. §1.3.

earth station applicants requesting authority to operate with a non-U.S.-licensed space station that is not in orbit and operating to post a bond.<sup>5</sup> The underlying purpose in having to post a bond – i.e., to prevent warehousing of orbital locations by operators seeking to serve the United States – would not be served by requiring Inmarsat Hawaii to post a bond in order to conduct a limited period of LEOP support of the YahSat 1B satellite.

Inmarsat Hawaii understands that YahSat 1B is licensed by Al Yah Satellite Communications Company of the United Arab Emirates. YahSat 1B is a commercial communications satellite primarily supporting broadband Internet and TV transmissions to the Middle East, Africa, Europe, and Southwest Asia. The spacecraft family is not meant to serve the United States. Thus, the purpose of Section 25.137 – to ensure that U.S. satellite operators enjoy “effective competitive opportunities” to serve foreign markets and to prevent warehousing of orbital locations serving the United States – will not be undermined by grant of this waiver request.

Finally, Inmarsat Hawaii notes that it expects to communicate with the YahSat 1B satellite using the 19m Antenna for a maximum period of 10 days under nominal launch conditions. Requiring Inmarsat Hawaii to obtain technical and legal information from an unrelated party, where there is no risk of interference and the operation will normally cease within 10 days would pose undue hardship without serving underlying policy objectives. Given these particular facts, Inmarsat Hawaii believes that the waiver sought herein is appropriate.

## MISSION TECHNICAL PARAMETERS

### Earth Station

Inmarsat Hawaii provides the following technical parameters for information only. The operations contemplated in this request fall within the existing license parameters for the 19m Antenna.

### EARTH-to-SPACE:

Transmit Frequencies: 6171.0 MHz and 6179.0 MHz  
Transmit Polarisation: Circular LH and RH  
Maximum EIRP: 89 dBW  
Modulation: PCM (NRZ-L)/PSK/FM (800KFXD)  
Minimum Elevation for Transmission: 10 degrees

### SPACE-to-EARTH:

Receive Frequencies: 3945.0 MHz and 3946.0 MHz  
Receive Polarisation: Circular LH and RH  
Maximum Spacecraft EIRP: 2 dBW within +/- 70 degrees  
Modulation: PCM (NRZ-L)/BPSK/PM (800KFXD)

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<sup>5</sup> 47 C.F.R. §25.137(d)(4).

Azimuth Range: 360 degrees

Duration of Communications: Once or twice a day for a period of a few hours for about three to ten days assuming a nominal launch scenario.

### **Space Station Coordination**

The coordination of communications for the support of the launch of the YahSat 1B spacecraft with existing spacecraft operators during LEOP operations is the responsibility of Astrium, who are the satellite operator during the campaign. Astrium has undertaken coordination of communications for the support of the launch of YahSat 1B with other spacecraft operators that may be potentially affected during LEOP operations.

Astrium has informed Inmarsat Hawaii that all the preparatory activities and contacts for such coordination have been made and all issues have been satisfactorily resolved. Astrium also has undertaken to review the need for coordination based on any changed circumstances that may occur. In accordance with normal industry practices, communications with other operators will be kept open in the period leading to and throughout the LEOP activities, to ensure that the LEOP will be conducted on a non-interference basis.

\* \* \* \* \*

Grant of the requested STA will serve the public interest, convenience and necessity because it will enable Inmarsat Hawaii to provide essential TTAC functions to the YahSat 1B spacecraft, within technical parameters consistent with the licensed parameters of the 19m Antenna, without creating any risk of harmful interference. Inmarsat Hawaii respectfully requests that the Commission grant STA beginning April 12, 2012 for period of 30 days.

**2. Contact**

|                   |   |                      |                           |
|-------------------|---|----------------------|---------------------------|
| <b>Name:</b>      | Chris Murphy                            | <b>Phone Number:</b> | 202.248.5158              |
| <b>Company:</b>   | Inmarsat                                | <b>Fax Number:</b>   |                           |
| <b>Street:</b>    | 1101 Connecticut Ave., NW<br>Suite 1200 | <b>E-Mail:</b>       | chris.murphy@inmarsat.com |
| <b>City:</b>      | Washington                              | <b>State:</b>        | DC                        |
| <b>Country:</b>   | USA                                     | <b>Zipcode:</b>      | 20036 -                   |
| <b>Attention:</b> |   | <b>Relationship:</b> |                           |

(If your application is related to an application filed with the Commission, enter either the file number or the IB Submission ID of the related application. Please enter only one.)

3. Reference File Number or Submission ID

4a. Is a fee submitted with this application?

If Yes, complete and attach FCC Form 159. If No, indicate reason for fee exemption (see 47 C.F.R. Section 1.1114).

Governmental Entity  Noncommercial educational licensee

Other (please explain):

4b. Fee Classification CGX – Fixed Satellite Transmit/Receive Earth Station

5. Type Request

Use Prior to Grant

Change Station Location

Other

6. Requested Use Prior Date

04/12/2012

7. City Haleiwa

8. Latitude

(dd mm ss.s h) 21 40 14.6 N

|  |   |
|--|---|
| 9. State HI  | 10. Longitude<br>(dd mm ss.s h) 158 2 3.1 W |
| 11. Please supply any need attachments.<br>Attachment 1: Ex. A (Narrative)                      Attachment 2:                      Attachment 3:   |   |
| 12. Description. (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.)<br><div style="border: 1px solid black; padding: 5px; margin: 5px 0;">See Exhibit A (narrative).</div>  |   |
| 13. By checking Yes, the undersigned certifies that neither applicant nor any other party to the application is subject to a denial of Federal benefits that includes FCC benefits pursuant to Section 5301 of the Anti-Drug Act of 1988, 21 U.S.C. Section 862, because of a conviction for possession or distribution of a controlled substance. See 47 CFR 1.2002(b) for the meaning of "party to the application"; for these purposes. <input checked="" type="radio"/> Yes <input type="radio"/> No |   |
| 14. Name of Person Signing<br>Diane J Cornell  | 15. Title of Person Signing<br>Director     |
| WILLFUL FALSE STATEMENTS MADE ON THIS FORM ARE PUNISHABLE BY FINE AND / OR IMPRISONMENT<br>(U.S. Code, Title 18, Section 1001), AND/OR REVOCATION OF ANY STATION AUTHORIZATION<br>(U.S. Code, Title 47, Section 312(a)(1)), AND/OR FORFEITURE (U.S. Code, Title 47, Section 503).  |   |

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**THE FOREGOING NOTICE IS REQUIRED BY THE PAPERWORK REDUCTION ACT OF 1995, PUBLIC LAW 104-13, OCTOBER 1, 1995, 44 U.S.C. SECTION 3507.**



Exhibit A

DESCRIPTION OF STA REQUEST  
AND  
PETITION FOR WAIVER OF SECTIONS 25.137 AND 25.114

**I. DESCRIPTION OF STA REQUEST**

Inmarsat Hawaii Inc. (“Inmarsat Hawaii”) hereby requests special temporary authority (“STA”) to use its 19 meter earth station antenna located in Paumalu, Hawaii and operated pursuant to Call Sign KA25 (the “19m Antenna”) to permit C-band telemetry, tracking, and control (“TTAC”) communications with the YahSat 1B spacecraft during its Launch and Early Orbit Phases (LEOP).<sup>1</sup> Operations of the 19m Antenna during this LEOP period would be consistent with the technical parameters of the existing license for KA25, although YahSat 1B is not currently a licensed point of communication for the 19m Antenna.

The YahSat 1B satellite will be launched by a Proton-M launch vehicle from the Russian Federal Space Agency (ROSCOSMOS) facility in Baikonur Cosmodrome, Kazakhstan. Inmarsat Hawaii and its affiliates will provide a network of ground stations around the globe that will provide communication with the spacecraft during the LEOP. The Inmarsat Hawaii facility at Paumalu, Hawaii will form part of the Inmarsat Hawaii ground station network for this launch support using the 19m Antenna. Launch is currently scheduled for April 15, 2012.

Inmarsat Hawaii has contracted with Astrium (France) to support the LEOP portion of the launch using the C-band portion of the satellite prior to its commercial operation. The mission control center will be located at the Astrium premises in Toulouse, France and all the mission operations will be conducted, under Astrium’s control. It is expected that the 19m Antenna will be used intermittently during the first three or four days of support for limited periods when the spacecraft is visible from the Paumalu station.

The final geostationary operational location for YahSat 1B will be at or near 47.5° E.L. No on-station operations with YahSat 1B will be possible from the Paumalu ground station once the satellite is operational given the lack of visibility to the final orbital location. Therefore, Inmarsat Hawaii’s support to Astrium using the Paumalu station and 19 m Antenna will be limited to the LEOP portion of the mission only.

**II. TO THE EXTENT THEY APPLY, GOOD CAUSE EXISTS FOR AWAIVER OF CERTAIN PORTIONS OF SECTIONS 25.137 AND 25.114**

Inmarsat Hawaii is providing the following legal and technical information to support this STA request and certain waiver requests that are necessary in order to communicate from the 19m Antenna to the YahSat 1B spacecraft as the spacecraft is not listed as a point of communications on Inmarsat Hawaii’s license for the antenna.

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<sup>1</sup> The YahSat 1B satellite is an EADS Astrium Eurostar 3000 Ka-band satellite designed for operation from the 47.5° E.L. orbital location.