

Request for Special Temporary Authority

Pursuant to Section 301(e) of the Communications Act,¹ ISAT US, Inc. (“ISAT”) requests special temporary authority (“STA”) to operate one (1) transmit/receive earth station mounted on a United States-flagged aircraft in the 29.5-30.0 GHz band for uplink communications and in the 19.7-20.2 GHz band for downlink communications using the Inmarsat-5 F1 satellite, located at the 62.6° E.L. orbital location (“I5F1”). Testing of the earth station will be conducted outside the United States over international waters and in foreign airspace while mounted on board a United States-flagged aircraft (Tail Number: N757HW)² and will be operated through Inmarsat’s gateway facility located in Fucino, Italy. ISAT requests STA for a period of 30 days commencing on May 1, 2015.

The earth station terminal at issue is a Honeywell MCS-8200 fuselage-mount user terminal, which is the subject of ISAT’s pending application with the Commission seeking blanket authority for earth station terminals to be mounted on aircraft to provide mobile communications services over Inmarsat’s Global Xpress Ka-band satellite system.³ The Application contains all of the technical parameters that are relevant for the STA operations, except that the terminal will communicate with I5F1 during the testing operations. I5F1 is technically identical to the Inmarsat-5 F2 satellite for which U.S. market access has been sought.⁴ Throughout the terminal testing, Inmarsat will remotely control the terminal operations through its Fucino, Italy gateway and Inmarsat’s Network Operations Center located in London. ISAT requests a waiver of the U.S. Table of Allocations to the extent necessary to operate mobile terminals in the segments of the Ka-band identified above, as detailed in the Application.⁵

The purpose of the proposed STA operations is to conduct acceptance testing of the prototype Earth Station manufactured by Inmarsat’s supplier, Honeywell, Inc. (“Honeywell”). During the testing, the aircraft will be flown within the airspace of the United Kingdom, Norway and the Netherlands and over international waters surrounding these countries. The relevant administration in each of these countries has adopted the

¹ 47 U.S.C. § 301(e).

² The aircraft to be used for the proposed tests is a Boeing 757 that is regularly utilized for various testing purposes and is owned and operated by the Honeywell Corporation.

³ ISAT US, Inc. Application for Earth Station Authorizations GX Aeronautical Mobile Blanket License Application, IBFS File No. SES-LIC-20141030-00832, Call Sign E140114 (filed Oct. 23, 2014) (the “Application”). This Application includes two different terminal types, but STA is being sought only for the terminal identified as “Aero 1” on the Schedule B.

⁴ See Inmarsat Mobile Networks, Inc., Application for Authority to Operate Gateway Earth Station with I5F2 Satellite at 55° W.L., File No. SES-LIC-20120426-00397, Call Sign E120072 (filed Apr. 26, 2012), as amended.

⁵ See Application, Exhibit A at 6; see also 47 C.F.R. § 2.106.

decision of the European Conference of Postal and Telecommunications Administrations (“CEPT”) governing the operation of earth stations on mobile platforms in the Ka band.⁶

The proposed STA operations would not cause harmful interference into primary operations in the proposed frequencies. The parameters of the testing are within the levels that Inmarsat either has coordinated, or has informally agreed upon during coordination discussions, for I5F1 with all adjacent co-frequency satellite networks. Furthermore, the proposed STA operations will protect adjacent operations consistent with Section 25.138(a) of the Commission’s rules for EIRP spectral density off axis limits and in compliance with the requirements of ECC Decision 13(01). In the Application, ISAT explained that the performance of this asymmetrical antenna in the elevation plane exceeds the Section 25.138(a)(2) off-axis EIRP spectral density mask in limited circumstances when the axis of the antenna is oriented at skew angles below approximately 15 degrees in relation to the GSO plane.⁷ In the geographic area for the proposed testing, the skew angles are entirely above 15 degrees, and thus, the off-axis power density levels will comply with the Section 25.138(a) limits at all times during the testing operations.

Testing the earth station on an aircraft requires approval by the Federal Aviation Administration, and FAA Flight Safety Certification for this earth station and this specific aircraft will have been granted prior to execution of the tests.

Granting this STA would serve the public interest by facilitating the assessment of the prototype earth station and will enable Inmarsat to proceed in implementing its ultimate plans to deploy the aeronautical antennas for the provision of broadband access service. As detailed in the Application, facilitating the ultimate availability of broadband access on board aircraft will help satisfy the rapidly growing demand and consumer expectations for ubiquitous Internet connectivity on land, at sea, and in the air.⁸ The Commission previously has granted STA under similar circumstances,⁹ as well as permanent authority to operate Ka-band mobile earth stations on board aircraft.¹⁰

⁶ See CEPT Electronic Communications Committee (ECC) Decision 13(01) approved 8 March 2013, “The harmonized use, free circulation and exemption from individual licensing of Earth Stations On Mobile Platforms (ESOMPs) within the frequency bands 17.3-20.2 GHz and 27.5-30.0 GHz, *available at* http://www.erodocdb.dk/doks/implement_doc_adm.aspx?docid=2477 (adopted by the United Kingdom as of June 25, 2014, Norway as of June 25, 2014, and Netherlands as of Jan. 27, 2015).

⁷ Application, Exhibit A at 10.

⁸ See *id.*, Exhibit A at 1.

⁹ See, e.g., *Row 44, Inc., Application for Special Temporary Authority for Mobility Testing of Aircraft Earth Stations*, File No. SES-STA-20080711-00928, Order and Authorization, DA 09-585 (rel. Mar. 13, 2009).

¹⁰ See *ViaSat, Inc., Radio Station Authorization*, File No. SES-LIC-20120427-00404, Call Sign. E120075 (Granted July 17, 2013).

For these reasons, ISAT submits that grant of STA is in the public interest in this case. ISAT will make available a 24/7 point of contact who can be reached in the unlikely event that any issues arise in connection with the operations under the requested STA. Personnel will be on duty at all times during the STA period. I can be contacted personally at (202) 248-5158. Inmarsat's Network Operations Center in London is also available 24 hours per day and can be reached at +44 20 77281616.