



March 28, 2023

Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
45 L Street NE
Washington, DC 20554

Re: Request for Special Temporary Authority to Operate Ball 9x9 Ku-band ESIM Terminal

Dear Ms. Dortch:

Intelsat License LLC ("Intelsat") herein requests 30 days of Special Temporary Authority ("STA"),¹ commencing upon grant but no later than April 24, 2023, to operate an airplane-mounted Ball 9x9 0.46m Ku-band earth station in motion ("ESIM") terminal with non-geostationary orbit ("NGSO") and geostationary orbit ("GSO") fixed-satellite service system satellites for testing and demonstrations.² The requested operations will occur while on the tarmac and in-flight within the United States ("U.S."), U.S. territories, and U.S. territorial waters; and in foreign territories or over international waters outside of the U.S. on a U.S.-flagged aircraft.³ Intelsat expects the operations to continue through December 2023.

The requested operations will be performed in the following frequency bands: 14000-14500 MHz (uplink) and 10700-12200 MHz (downlink) with the WorldVu Satellites Limited's NGSO FSS System (Call Sign S2963) and Permitted List satellites. In support of this request, Intelsat herein attaches additional technical information, off-axis EIRP spectral density plots, and a Radiation Hazard Report as Exhibits A-C, respectively.

The 24x7 contact information for the proposed operations is:

Angela Wheeler
Director, Network Operations Center
Ph.: (404) 381-2820

¹ Intelsat has filed its STA request, FCC Form 159, the applicable filing fee, and this supporting letter electronically via the International Bureau's Filing System.

² The proposed aeronautical operations will confirm with the coordination agreement between Intelsat and National Aeronautics and Space Administration.

³ Intelsat has STA in place to operate the requested antenna on the ground and in-flight within the U.S., U.S. territories, and international waters to communicate with NGSO and GSO satellites. See, e.g., Intelsat License LLC, Request for Special Temporary Authority, Submission ID IB2023001438 (filed Mar. 24, 2023); see also *Satellite Communications Services Information; Actions Taken*, Report No. 02552, File No. SES-STA-20230223-00211 (Mar. 22, 2023) (Public Notice). The herein requested authority will replace the current authority.

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In further support of this request, Intelsat understands and accepts that grant of STA in the 14.0-14.5 GHz band will be subject to the following conditions:

1. Operations in 14.0-14.2 GHz shall be limited to those outside the line-of-sight of the Federal Tracking and Data Relay Satellite System sites specified in 47 CFR 25.228(j)(1).
2. Operations in 14.47-14.5 GHz shall be limited to those outside the line-of-sight of active Federal sites identified in footnote US113 of the U.S. Table of Frequency Allocations.

Additionally, the proposed operations in territory or airspace of any country other than the United States will be in compliance with the applicable laws, regulations, and licensing procedures of that country, as well as the grant conditions of this STA request.

The proposed operations will enable Intelsat to test and demonstrate new equipment. Accordingly, grant of this request is in the public interest.

Respectfully submitted,

/s/ Cynthia J. Grady
Cynthia J. Grady
Assistant General Counsel
Intelsat US LLC

cc: Franco Hinojosa

EXHIBIT A

Intelsat License LLC
Request for Special Temporary Authority to Operate Ku-band Flat Panel Antenna
NGSO System Operations

Antenna Description	Ball Aerospace 9x9 Subarray Gen II 3S
Antenna Size (m)	0.46 m ²
Transmit Frequencies (MHz)	14000-14500
Receive Frequencies (MHz)	10700-12200
Emission Designator(s)	125MG7D
Polarization	Linear
Bandwidth	125 MHz
Transmit Gain	36.8 dBi at 14.3 GHz (boresight) 32.6 dBi at 14.3 GHz (25° elevation angle)
Maximum EIRP per Carrier (dBW)	51.7
Maximum EIRP Density per Carrier (dBW/4 kHz)	15 dBW/4 kHz at 14.0 GHz 15.4 dBW/4 kHz at 14.5 GHz
Site Locations and Latitude/Longitude	Global use
Satellite Point(s) of Communication, Call Sign	WorldVu Satellites Limited NGSO FSS System (Call Sign S2963)

Exhibit A continued on next page

EXHIBIT A continued

Intelsat License LLC
Request for Special Temporary Authority to Operate Ku-band Flat Panel Antennas
GSO System Operations

Antenna Description	Ball Aerospace 9x9 Subarray Gen II 3S
Antenna Size (m)	0.46 m ²
Transmit Frequencies (MHz)	14000-14500
Receive Frequencies (MHz)	10700-12200
Emission Designator(s)	1M23G7D, 7M28G7D, 1M51G7D, 1M80G7D, 2M00G7D, 2M00G7D, 2M10G7D, 2M27G7D, 2M40G7D, 3M00G7D, 3M60G7D, 4M10G7D, 4M80G7D, 5M60G7D, 5M64G7D, 5M83G7D, 5M97G7D, 6M72G7D, 7M17G7D, 7M40G7D, 7M50G7D, 8M00G7D, 8M10G7D, 1M00G7W, 1M20G7W, 1M75G7W, 2M00G7W, 3M00G7W, 4M00G7W, 6M00G7W, 7M48G7W, 930KG7W, 7M20G7W, 6M35G7W, 5M05G7W, 2M50G7W, 14M7G7D, 2M05G7W
Polarization	Linear
Bandwidth	930 kHz to 14 MHz
Transmit Gain	36.8 dBi @ 14.3 GHz (boresight) 32.6 dBi @ 14.3 GHz (25° elevation angle)
Maximum EIRP per Carrier (dBW)	51.7
Maximum EIRP Density per Carrier (dBW/4 kHz)	15.8
Site Locations and Latitude/Longitude (NAD83)	Global use
Satellite Point(s) of Communication, Call Sign, and Orbital Location	Permitted List satellites