



December 13, 2022

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

Re: Request for Special Temporary Authority to Operate a Ku-band ESIM Terminal  
with GSO System Satellites

Dear Ms. Dortch:

Intelsat License LLC ("Intelsat") herein requests 30 days of Special Temporary Authority ("STA"),<sup>1</sup> commencing December 29, 2022, to operate a 0.46 x 0.46 m, square Ku-band earth station in motion ("ESIM") terminal with geostationary orbit ("GSO") system satellites for testing and demonstrations.<sup>2</sup> The proposed operations will occur while the airplane is on the tarmac at the Fort Worth Alliance Airport (AFW) in Fort Worth, TX and the San Juan Airport (SJU) in San Juan, Puerto Rico, as well as inflight. Inflight testing operations will occur over the continental United States, Puerto Rico and U.S. territories in the greater Caribbean area, and international waters. Testing will not occur over foreign territories or waters.

Intelsat requests to operate the ESIM terminal in 11700-12200 MHz (downlink) and 14000-14500 MHz (uplink) and to communicate with GSO satellites Galaxy 11, Galaxy 17, Galaxy 18, Galaxy 33, Intelsat 32e/SKY-B1, Intelsat 37e, SES 6, SES 10, and DIRECTV T11. 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, at (404) 381-2820 or [angela.wheeler@intelsat.com](mailto:angela.wheeler@intelsat.com).

In the extremely unlikely event that harmful interference should occur due to transmissions to or from its antenna, Intelsat will take all reasonable steps to eliminate the interference.

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

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

The proposed operations will enable Intelsat to test 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: Kerry Murray  
Franco Hinojosa

## EXHIBIT A

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

|                                                                      |                                                                                                                                                                                                                                                                                                                                                      |
|----------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Antenna Description                                                  | Ball Aerospace 9x9 Subarray Gen II 3S                                                                                                                                                                                                                                                                                                                |
| Antenna Size (m)                                                     | 0.46 x 0.46 square                                                                                                                                                                                                                                                                                                                                   |
| Transmit Frequencies (MHz)                                           | 14000-14500                                                                                                                                                                                                                                                                                                                                          |
| Receive Frequencies (MHz)                                            | 11700-12200                                                                                                                                                                                                                                                                                                                                          |
| 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)<br>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)                        | Fort Worth Alliance Airport (AFW) in Fort Worth, TX<br>32° 59' 13.56" N, 97° 18' 50.34" W<br>San Juan Airport (SJU) in San Juan, Puerto Rico<br>18° 26' 16.08" N, 66° 0' 20.52" W<br>Inflight over the continental United States, Puerto Rico and U.S. territories in the greater Caribbean area, and international waters                           |
| Satellite Point(s) of Communication, Call Sign, and Orbital Location | Galaxy 11 (S2253) at 93.1° W.L.<br>Galaxy 17 (S2715) at 91.0° W.L.<br>Galaxy 18 (S2733) at 123° W.L.<br>Galaxy 33 (S3015) at 133° W.L.<br>Intelsat 32e/SKY-B1 (S2922) at 43.15° W.L.<br>Intelsat 37e (S2972) at 18.0° W.L.                                                                                                                           |

SES 6 (S2870) at 40.5° W.L.

SES 10 (S2950) at 66.9° W.L.

DIRECTV T11 (S2640) at 99.185° W.L.