

Exhibit A

DESCRIPTION OF STA REQUEST

I. DESCRIPTION OF STA REQUEST FOR SEVEN-DAY PERIOD STARTING SEPTEMBER 4, 2018

Inmarsat Inc. (“Inmarsat”) hereby requests special temporary authority (“STA”) to communicate with the Nimiq-2 satellite at 28° W.L. with the Lino Lakes Satellite Access Station (SAS) in the 19.7-20.2 GHz (space-to-Earth) and 29.5-30.0 GHz (Earth-to-space) bands. The Lino Lakes SAS is authorized for operation in the U.S. and communicates with the Inmarsat 5 F2 satellite at the 55° W.L. orbital location.¹ The requested operations are to conduct tests of the Lino Lake facility including to assess Ka-band antenna performance at low elevation angles for spacecraft emergency scenarios. The Lino Lakes SAS operations under this STA will remain within the transmit power parameters licensed by the Commission. All operations under this STA will be conducted on a non-interference/non-protected basis. Inmarsat will be responsible for all technical aspects of the system during the testing. All operations will be closely monitored by the Inmarsat Network Operations Center and the engineering team associated with the testing. It is expected that the testing will occur during a one day period on September 4, 2018. The STA is requested for a 7 day period starting on September 4, 2018 to take into account any unforeseen schedule delays.

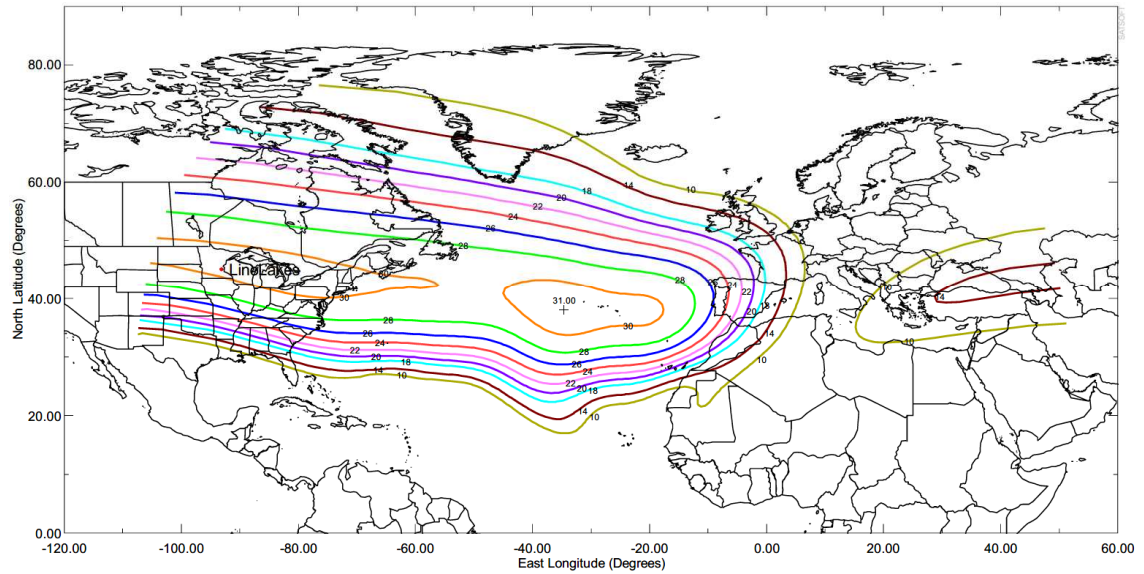
II. INMARSAT SEEKS AUTHORITY TO COMMUNICATE WITH THE NIMIQ 2 SATELLITE IN THE 19.7-20.2 GHZ AND 29.5-30.0 GHZ BANDS

The Nimiq-2 satellite is operated and owned by Telesat and is located at 28° W.L. orbital location. The proposed parameters for the testing are shown in the Table below. During the testing a single Continuous Waveform (CW) transmission will be stepped, in 10 MHz intervals, across the frequency range to assess the antenna performance at low elevation angles. The Nimiq-2 satellite operates with an inclination of 2.9 degrees thus the elevation angle from the Lino Lakes SAS to the Nimiq-2 satellite varies between seven and eleven degrees.

Uplink Carrier type	CW
Uplink frequency range	29.5 to 30.0 GHz
Uplink Polarization	LHCP and RHCP
Downlink frequency range	19.7 to 20.2 GHz
Downlink Polarization	LHCP and RHCP
Uplink ground EIRP (at Lino Lakes)	47 dBW
Uplink Power Flux Density (at satellite)	-116 dBW/m ²
Downlink satellite EIRP	31 dBW
Downlink Power Flux Density (on ground)	-132 dBW/m ²

¹ See, Inmarsat Mobile Networks, Inc., Granted March 30, 2015, 30 FCC Rcd 2770 (Call Sign E120072; IBFS File No. SES-LIC-20120426-00397) (“Lino Lakes Order”).

The EIRP contours of the Nimiq-2 satellite is shown in the Figure below.



There are several satellites that operate in the requested frequency range that are +/- 6 degrees from the Nimiq-2 satellite. These include Hispasat satellites at 30°W.L. and 26°W.L., an Avanti satellite at 33.5°W.L. and a U.S. Department of Defense satellite. The proposed testing will be on a non-interference/non-protected basis, however Inmarsat intends to notify these operators of the proposed very short term testing under this STA and provide these operators with a 24 hour point of contact during the testing period to immediately address any concerns that may arise. The likelihood of interference to any of these satellites is very small. First the Lino Lakes uplink transmit EIRP for the proposed test is well below what would be allowed by the Commission's rules that are based on two degree spacing between GSO satellites. The Lino Lakes antenna is 13.2 m, which provides significant isolation to near-by satellites compared to VSAT earth stations that are blanket licensed in this frequency range. In the downlink the maximum EIRP from the spacecraft under the STA will be 31 dBW resulting in a power flux density on the ground of -132 dBW/m² which is 14 dB below the power flux density of -118 dBW/m² typically produced by GSO FSS networks. Consistent with the U.S. Ka-band plan there are no terrestrial operations in the proposed frequency ranges.

In the very unlikely event of interference, the 24 Hour Point of Contact during the STA is Inmarsat Network Control +44 207 728 1616.

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Grant of the requested STA will serve the public interest, convenience and necessity because it will enable Inmarsat to conduct testing of the performance of the Lino Lakes SAS at low elevation angles without creating any risk of harmful interference. Inmarsat respectfully requests that the Commission grant STA beginning September 4, 2018 for a period of 7 days.