

## APPLICATION FOR SPECIAL TEMPORARY AUTHORITY

Ligado Networks Subsidiary LLC (“Ligado”), pursuant to Section 25.120 of the Commission’s Rules, hereby requests an extension of its existing special temporary authority (“STA”)<sup>1</sup> to conduct telemetry, tracking, and command (“TT&C”) communications with MSAT-2 (AMSC-1) at 106.5° WL during the pendency of its application to modify the MSAT-2 to relocate from 103.3° WL to 106.5° WL.<sup>2</sup> Ligado requests that the Commission extend the August STA an additional 60 days, commencing on October 4, 2018 and ending on December 3, 2018.

Ligado commenced the drift from MSAT-2’s previous location at 103.3°<sup>3</sup> to 106.5° on September 5, 2018, and is on track to complete the maneuver before the August STA expires on October 4, 2018. Ligado will, however, need to continue conducting TT&C communications with the satellite while the Commission considers the MSAT-2 Modification Application. As such, the following repeats information from the August STA application relevant to ongoing operations at the new orbital location. Please also note that, consistent with the MSAT-2 Modification Application, Ligado is requesting authorization to operate with an east-west station-keeping range of +/-0.1 degree.

The August STA application requested authorization to relocate MSAT-2 from 103.3° WL to 106.5° WL, an orbital position under Canadian authority. During the relocation, MSAT-2’s communications payload hardware is powered on but is not providing downlink services. During the drift, Telesat Canada Inc. (“Telesat”), Ligado’s contractor for flight operations, is operating only (1) MSAT-2’s telemetry, tracking, and command TT&C payload on 11.701 GHz (primary), 11.7005 GHz (backup), 14.0005 GHz (backup) and 14.4995 GHz (Primary) and (2) MSAT-2’s beacon frequencies at 10.7535 GHz (primary) and 10.751 GHz (backup).

MSAT-2 serves as a backup satellite to Ligado’s other U.S. satellite, ST-1 and, as a backup satellite, does not currently carry customer traffic. The orbital location at 106.5° WL is the former location of Ligado’s Canadian satellite, MSAT-1, which was moved from 106.5° WL to 107.5° WL in October, 2015. Ligado will file an application in the near future to modify MSAT-2’s satellite license and associated U.S. earth station and mobile earth terminal licenses. Innovation, Science & Economic Development (“ISED”) Canada is aware of the August STA and the request for an extension.<sup>4</sup>

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<sup>1</sup> See FCC File No. SAT-STA-20180810-00061 (granted Aug. 28, 2018) (“August STA”).

<sup>2</sup> See FCC File No. SAT-MOD-20180912-00070 (filed Sept. 12, 2018) (“MSAT-2 Modification Application”).

<sup>3</sup> See FCC File No. SAT-MOD-20100412-00075 (granted Nov. 8, 2010) (granting authority to move MSAT-2 to 103.3°); FCC File No. SAT-MOD-20171215-00172 (granted Jan. 23, 2018) (extending MSAT-2 operations through Dec. 31, 2018).

<sup>4</sup> Ligado requested in both the August STA and the MSAT-2 Modification Application that the Commission indicate to ISED that it consents to relocating MSAT-2 to bring back into use the orbital location at 106.5° WL, and to the extent necessary reiterates that request here. See ITU,

Grant of this application is entirely consistent with the Commission's policy of granting Special Temporary Authority when doing so will not cause harmful interference and will serve the public interest, convenience and necessity.<sup>5</sup> The public interest, convenience and necessity is served because MSAT-2's previous location only allowed operation on a non-interference basis. The relocation of the satellite to 106.5°, without interference or harm to other operators, will result in MSAT-2 being better accommodated in a fully coordinated orbital location, thus providing future certainty for backup MSS operations.

With regard to interference, there is no risk of harmful interference from MSAT-2 operating in the new location. As MSAT-2 and MSAT-1 were built to the same design specifications, MSAT-2's operating characteristics and interference envelope are identical to those of MSAT-1,<sup>6</sup> which operated in that location for 20 years without causing any harmful interference to other operators. Moreover, this location has already been coordinated with other L-band operators assuming use by an MSAT-class satellite. Thus, placement of MSAT-2 will not create any new interference risk that has not already been discussed and resolved by the relevant operators. Finally, MSAT-2's TT&C communications pursuant to the August STA and this extension will be on a secondary, non-interference basis. The MSAT-2 Modification Application provides further information substantiating the absence of any risk of harmful interference.<sup>7</sup>

With regard to MSAT-2's east-west station keeping range, MSAT-2 has adopted an increasingly inclined orbit, which will continue to increase for several years after relocation to the new orbital location. Accordingly, to provide necessary flexibility for expected operations for the next five years and to extend MSAT-2 remaining fuel life, Ligado requested in the MSAT-2 Modification Application to change the north-south station-keeping range to +/-13.5 degrees and, pursuant to 47 C.F.R. §25.201(j), requested that the Commission authorize a change to the east-west station-keeping range to +/-0.1 degrees.

As explained in the MSAT-2 Modification Application,<sup>8</sup> these ranges will not result in any overlap with any neighboring satellites. The nearest existing satellites to the new orbital location are a U.S. Navy satellite located at 105.5°WL and a Telesat satellite located at 107.3°WL, neither of which will overlap with MSAT-2's station-keeping range. Ligado has also reviewed planned satellites and determined that there will be no overlap with the nearest

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Radiocommunication Bureau, *WRC-12 decisions included in the Minutes of Plenary meeting relating to space services procedures*, Circular Letter CR/333 (2012) at 2 (citing (§3.12 Doc. CMR12/554); see also ITU, Radiocommunication Bureau, *Decisions of past WRCs concerning the application of the Radio Regulations*, Circular Letter CR/380 (2015) at 3 (same).

<sup>5</sup> See e.g., *Newcomb Communs., Inc.*, 8 FCC Rcd. 3631, 3633 (1993); *Columbia Comms. Corp.*, 11 FCC Rcd. 8639, 8640 (1996); *Am. Tel. & Tel. Co.*, 8 FCC Rcd. 8742 (1993).

<sup>6</sup> MSAT-2 does differ from MSAT-1 in only one respect: MSAT-2 uses 11.7005 GHz as a backup TT&C frequency, while MSAT-1 uses 11.70275 GHz as a backup. This difference is not material, however, to interference with any other operator.

<sup>7</sup> See MSAT-2 Modification Application, Exhibit C, 4-6 and Technical Exhibit.

<sup>8</sup> See *id.*, Exhibit C, 2-3.

planned satellites, none of which will be placed into orbit through the duration of the extension requested.

Accordingly, and for good cause shown, Ligado respectfully requests that its STA request be granted.