7 February 2024

Nerida O'Loughlin, PSM, Chair
Chan Street
Australian Capital Territory 2617
Canberra, Australia

Re: **Satellite Direct-to-Mobile Services: Regulatory Issues**

Dear Ms. O'Loughlin:

Lynk Global, Inc. (Lynk) respectfully responds to the Australian Communications and Media Authority's (ACMA) request for submissions in the Satellite Direct-to-Mobile Services (SDMS): Regulatory Issues Consultation.

I. Lynk's SDMS Solution

Lynk is very excited by ACMA's leadership in taking up SDMS to solve the challenge of mobile phone connectivity across Australia. Lynk's mission is to provide connectivity to all 7.7 billion people everywhere on Earth *via* its patented 3GPP compliant fronthaul satellite communications system. Utilizing terrestrial spectrum bands, Lynk's space-based cell towers connect to a mobile network operator's (MNO) terrestrial network as a roaming partner to expand coverage for mobile phones that terrestrial networks cannot economically or technically reach. The Lynk system also provides instantaneous backup coverage and added resiliency for existing MNO infrastructure if there is disruption or damage to the primary terrestrial network.

Lynk was the first company to successfully demonstrate that non-geostationary orbit (NGSO) satellites in low Earth orbit can connect with unmodified, commercial-off-the-shelf cellular phones when a cellphone in the Falkland Islands received a text message from the Lynk payload on the Cygnus capsule.[1] To date, Lynk has deployed eight satellites, operating pursuant to experimental authorizations.[2] In addition, Lynk is the first and only commercial operator to receive a United States Federal Communications Commission (FCC) license for the provision of Supplemental Coverage from Space (SCS)[3] services.[4] Under this license, Lynk can build and

[1] *See*, *e.g.*, Loren Grush, *Space startup Lynk uses satellite to send text messages to unmodified Android phone*, THE VERGE (Mar. 18, 2020), https://www.theverge.com/2020/3/18/21184126/lynk-mega-constellation-text-message-android-smartphone-cell-towers-space.
[2] *See*, *e.g.*, Lynk Global, Inc., Federal Communication Commission's (FCC) ELS File No. 0113-EX-CN-2022 (granted May 25, 2022); Lynk Global, Inc., FCC ELS File No. 1117-EX-CN-2021 (granted May 25, 2022).
[3] Supplemental Coverage from Space (SCS) is the United States FCC's regulatory term of art for classifying the service offering with the same meaning as the Australian moniker Satellite Direct-to-Mobile Services (SDMS).
[4] Lynk Global, Inc., FCC Order and Authorization, DA 22-969, File No. SAT-LOA-20210511-00064 (IB 2022).

operate ten satellites to provide SCS services outside the United States, subject to the approval of local regulatory authorities.

II. The ACMA's Potential Regulatory Approach to Implementation of SDMS

Lynk supports a regulatory licensing approach that fuels innovation, protects competition, and accelerates the use of SDMS. To accomplish those goals, Lynk believes the approach proposed at the Spectrum Tune Up - to use ITU-R Radio Regulations Article 4.4 - is the most expeditious means to introduce SDMS into Australia.[5] This approach, when combined with experimental demonstrations of a system's architecture and business arrangements between SDMS providers and MNOs, provides a flexible path to expedient SDMS deployment.

This approach enables all MNOs – including nationwide spectrum licensees, regional and rural carriers, and carriers with fragmented spectrum holdings – to pursue SDMS as soon as possible. Implementing nationwide geographic licensing, as other nations have proposed, is well-intentioned in solving the most straightforward case first but it is potentially anti-competitive and may negatively impact rural carriers. Based on Lynk's global experience, multiple alternative paths toward service can adequately protect adjacent channel and area license holders through business arrangements rather than rules that postpone the inclusion of smaller regional carriers. Conditions requiring SDMS providers to meet terrestrial power levels at geographic boundaries,[6] as well as other terrestrial license holder technical limits, protect adjacent license holders. For example, Lynk has successfully negotiated agreements with MNOs in countries such as New Zealand and Mongolia that eliminate these technical concerns.

SDMS satellite architectures can differ both technologically and with respect to spectrum, so it is imperative that prospective providers first demonstrate their systems under experimental licenses in full view of co-channel and adjacent users. SDMS systems meeting these technical requirements and showing no harmful interference should be commercially licensed in their demonstrated range of frequencies and geographies, but service should be conditioned on operations under a business arrangement with one or more existing terrestrial licensees.

III. SDMS Will Provide Public Benefit

SDMS can provide near-instantaneous backup to terrestrial wireless networks that are exposed to natural and man-made disasters and can be utilized where network coverage is fragmented or does not exist in rural areas of Australia. Lynk looks forward to working with terrestrial operators to explore how this can be introduced to satisfy network resiliency obligations and emergency response and preparedness requirements.

---

[5] *See* ITU Radio Regulations Article 4.4, Edition of 2020 (stating that "Administrations of the Member States shall not assign to a station any frequency in derogation of either the Table of Frequency Allocations in this Chapter or the other provisions of these Regulations, except on the express condition that such a station, when using such a frequency assignment, shall not cause harmful interference to, and shall not claim protection from harmful interference caused by, a station operating in accordance with the provisions of the Constitution, the Convention and these Regulations.").

[6] Initial entrants in SCS are limited to 96dBm RSSI at the cell edge.

Lynk SDMS technology allows commercial subscribers to send and receive text messages to and from space *via* standard, unmodified mobile devices. Lynk also provides cell broadcast (emergency) alerts and will launch voice and mobile broadband services in the future. By partnering with Lynk *via* a simple roaming agreement, mobile network operators can offer much-needed public safety communications and provide wireless and broadband services in the most remote areas. The Lynk system creates a common communications platform that supports emergency response by connecting first responders, government agencies, international first responders[7] and agencies, and affected communities across Australia and around the globe.

To that end, Lynk supports consideration of future implementation of 000 and Wireless Emergency Alert requirements for SDMS providers. Lynk encourages the ACMA to consider a holistic review of the technical constraints and other unique aspects of providing emergency alerting and response services over satellite networks.

Conclusion

SDMS delivers affordable ubiquitous rural connectivity while simultaneously providing redundancy for critical communications. For the above reasons, we encourage the ACMA to proceed using ITU-R Radio Regulations Article 4.4, as proposed at the Spectrum Tune Up. This approach will allow for the rapid adoption of SDMS technology by recognizing that business arrangements between satellite operators and MNOs can adequately and efficiently protect incumbent licensees.

Please direct any questions you may have to the undersigned.

Respectfully submitted,

/s/ *Margo R. Deckard*

Margo R. Deckard
Chief Operating Officer
Lynk Global, Inc.
510 N. Washington St., Suite 200
Falls Church, VA 22046
USA

[7] *See*, *e.g.*, Bill Gabbert, *U.S. and Canada send firefighters to Australia*, WILDFIRE TODAY (Dec. 5, 2019).