



December 11, 2025

Independent Communications Authority of South Africa
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South Africa Private Bag X10, Highveld Park 0169
Centurion, Pretoria 8
Republic of South Africa

Submitted via email: dmoshweunyane@icasa.org.za and rmakgotlho@icasa.org.za

RE: Skylo Technologies Response to the Public Consultation on the Second Draft National Radio Frequency Plan

Dear Mr. Davis Kgosimolao Moshweunyane and Mr. Manyaapelo Richard Makgotlho:

Skylo Technologies, Inc. (Skylo) sincerely appreciates the opportunity to submit a response to the Independent Communications Authority of South Africa's (ICASA's) Public Consultation on the Second Draft National Radio Frequency Plan (Draft NRFP). As government regulatory frameworks and spectrum planning are integral to the availability and success of Skylo's Narrowband Non-Terrestrial Network (NB-NTN) mobile-satellite service (MSS) business globally, Skylo commends ICASA for its continued leadership and transparency by seeking stakeholder feedback and holding public forums to gather input. These efforts are crucial to improve the quality and breadth of communication services in the Republic of South Africa, especially in underserved and remote rural areas, mountainous regions, game reserves, and maritime areas.

Skylo's response to ICASA's consultation highlights its 3GPP-standards based NB-NTN Direct-to-Device (D2D) service offering currently operational in MSS frequency bands using existing satellite infrastructure. Additionally, we emphasise the critical need to ensure that the MSS frequency bands necessary to enable the satellite component of IMT are readily available in RSA. Skylo's D2D NB-NTN services will assist in enabling ICASA's objectives to ensure that all people in South Africa have access to basic communication services at affordable prices.

Skylo appreciates the opportunity to contribute to this important consultation and would be pleased to present virtually during ICASA's public forum in January.

Sincerely,

Molly Gavin
Vice President of Government Affairs and Compliance
Skylo Technologies, Inc.
Email: Regulatory@skylo.tech



I. Background on Skylo Technologies, Inc.

Skylo was founded to bridge coverage gaps, allowing standard cellular devices to transmit signals via satellite when out of range of traditional cell towers. Skylo's NB-NTN MSS provides network components that seamlessly extend the cellular experience, ensuring continuous coverage if devices have a clear view of the sky. Currently, Skylo offers a real-time 24/7 direct-to-device (D2D) service, spanning five continents, 37 countries, over 60 million square kilometers and with more than 11 million activations.

Skylo's service utilises existing satellite infrastructure, primarily geostationary (GEO) satellites, though it is also compatible with low earth orbit (LEO) satellites. This D2D NB-NTN service adheres to 3GPP Release 17 standards and operates over dedicated, licensed MSS L- and S-band spectrum, enabling standard mobile phones, wearables, and Internet of Things (IoT) devices to connect directly to satellite infrastructure.

Skylo has various business models for service provision: it works directly with Mobile Network Operators (MNOs) such as Verizon, Orange, Deutsche Telekom, Tele2, Charter Communications, Comcast and Telefonica, or with original equipment manufacturers (OEMs) such as Google and Garmin.¹

Skylo's D2D NB-NTN services are revolutionizing satellite connectivity globally, offering cost-effective, highly dependable, and universally accessible solutions. This is achieved through compatibility with common consumer devices like smartphones, as well as wearables such as smart watches. In some cases, Skylo partners directly with device manufacturers that are looking to provide satellite safety services. Wearable devices or smartphones can send emergency messages directly to a Global Emergency Response Provider/Center or a personal contact. In this scenario, the device manufacturer can provide its end user devices with Skylo-

¹ <https://www.skylo.tech/newsroom/skylo-connectivity-enables-new-satellite-sos-feature-on-google-pixel-9-series>; <https://www.skylo.tech/newsroom/orange-becomes-the-first-european-operator-to-offer-satellite-sms-service-with-skylo>; <https://www.skylo.tech/newsroom/google-and-skylo-expand-satellite-connectivity-to-pixel-10-series-and-unveil-pixel-watch-4>; <https://www.skylo.tech/newsroom/skylo-expands-collaboration-with-garmin-to-bring-satellite-connectivity-to-new-fenix-r-8-pro-smartwatches>; <https://www.verizon.com/about/news/verizon-skylo-launch-direct-device-messaging-customers>; <https://www.skylo.tech/newsroom/skylo-certifies-the-samsung-galaxy-s25-series-on-verizon>; <https://www.skylo.tech/newsroom/skylo-expands-deutsche-telekom-s-converged-cellular-and-satellite-connectivity-to-iot-applications>; <https://www.skylo.tech/newsroom/o2-telefonica-and-skylo-deliver-hybrid-cellular-non-terrestrial-network-ntn-coverage>; <https://www.skylo.tech/newsroom/tele2-first-swedish-operator-to-launch-satellite-iot-connectivity-with-skylo>; and <https://www.skylo.tech/newsroom/charter-and-comcast-launch-satellite-connectivity-for-mobile-devices>.

enabled connectivity native in the device – meaning that users do not need to use an app to access the emergency service. For now, this business model focuses on emergency services. In an emergency such as a wildfire, flood, storm, shipwreck, or automobile accident, affected users connect to the Global Emergency Response Center, which then coordinates with the government-designated search and rescue center in the licensed country to determine which local entity would manage the emergency response. Currently, device manufacturers generally provide the emergency satellite service as a feature of the phone free of charge.

II. Comments on the Second Draft National Radio Frequency Plan

Skylo offers D2D services by utilising dedicated, licensed MSS L- and S-band spectrum. These bands are the preferred choice for D2D because they have been globally allocated by the International Telecommunication Union (ITU) for MSS and are supported by a decades-long stable regulatory framework which enables global harmonisation and effectively minimises the risk of harmful interference.

The most common L- and S-bands used by MSS operators globally have been explicitly included in 3GPP Release 17 and later releases for NTN. This inclusion, covering bands such as n256, n255, n254, n252, n251 and n250 is crucial for achieving economies of scale and ensuring device interoperability. Skylo lists these paired frequency bands below for ICASA's reference.

Table 1: 3GPP NTN satellite bands to prioritize for NTN-D2D²

NTN satellite operating band1	Uplink (UL) operating band Satellite Access Node receive / UE transmit FUL,low – FUL,high	Downlink (DL) operating band Satellite Access Node transmit / UE receive FDL,low – FDL,high	Duplex mode
n256	1980 MHz – 2010 MHz	2170 MHz – 2200 MHz	FDD
n255	1626.5 MHz – 1660.5 MHz	1525 MHz – 1559 MHz	FDD
n254	1610 – 1626.5 MHz	2483.5 – 2500 MHz	FDD
n253	1668 MHz – 1675 MHz	1518 MHz – 1525 MHz	FDD
n252	2000 – 2020 MHz	2180 – 2200 MHz	FDD
n251	1626.5 MHz – 1660.5 MHz	1518 MHz – 1559 MHz	FDD
n250	1668 MHz – 1675 MHz	1518 MHz – 1559 MHz	FDD
NOTE: NTN satellite bands are numbered in descending order from n256.			

² See: 3GPP 38.101-5, NR; User Equipment (UE) radio transmission and reception; Part 5: Satellite access Radio Frequency (RF) and performance requirements, https://www.3gpp.org/ftp/Specs/archive/38_series/38.101-5/



All of these bands specified by 3GPP for NTN are also bands identified by ITU Resolution 225 (Rev. WRC-12) for the satellite component of IMT (International Mobile Telecommunications). ITU-R recently finalized a recommendation, which includes the technical specifications of the satellite component of IMT-2020.³ Currently, the 3GPP specification for NTN, which notably includes Narrowband-IoT (NB-IoT), serves as a primary radio air interface.

Skylo commends ICASA for including the majority of the above MSS L and S-band frequencies in its draft NRFP as identified for the satellite component of IMT, citing Resolution 225. Skylo observes that in the draft NRFP, the 1980-2010 MHz (uplink) paired with the 2170-2200 MHz band (downlink) is listed as being monitored for 'the development of satellites for IMT services,' with reference to Europe and Saudi Arabia, and that a Radio Frequency Spectrum Assignment Plan (RFSAP) will be developed for this band. Skylo currently offers D2D NB-NTN services in this band in the U.S., Canada, and the E.U., supporting devices such as the Google Pixel 9 and 10 smartphones, Garmin smartwatches and would welcome the opportunity to be involved in the discussions for this RFSAP. Additionally, Skylo recommends that for consistency with the other MSS bands already identified for the satellite component of IMT, ITU Resolution 225 also be added in the notes and comments section as applying to the 1980-2010 MHz paired with the 2170-2200 MHz band.

Thank you for the opportunity to comment on this consultation.

³ Draft new Recommendation ITU-R M.[IMT-2020-SAT.SPECS] - Detailed specifications of the satellite radio interfaces of International Mobile Telecommunications-2020 (IMT-2020), approved at the November 2025 meeting of Study Group 4 and circulated to Administrations for final approval via correspondence:
<https://www.itu.int/md/R23-SG04-C-0041/en>.