27 August 2021

Mr. Manyaapelo Richard Makgotlho
Independent Communications Authority of South Africa (ICASA)
350 Witch-Hazel Avenue, Eco Point Office Park
Eco Park, Centurion
South Africa

Dear Mr. Makgotlho:

Omnispace LLC ("Omnispace") appreciates the opportunity to submit comments to the Independent Communications Authority of South Africa's *Draft National Radio Frequency Plan 2021* ("NFAP"). Omnispace worked closely with the Republic of South Africa delegation at the International Telecommunications World Radio Conference 2019 (WRC-19) and appreciates its commitment to ensure that all South Africans have access to a wide range of high-quality communications services at affordable prices. We also appreciate the work done by ICASA to update and enhance the NFAP.

Omnispace comments are specific to the 1980-2010 MHz / 2170-2200 MHz frequency bands as the company is the owner and operator of the only currently on orbit global non-geostationary orbit ("NGSO") satellite system that has been brought into use in this band in accordance with applicable International Telecommunication Union regulations. Omnispace is investing in new technology and infrastructure as part of its next generation global constellation to provide hybrid 5G non-terrestrial network (NTN) connectivity and is interested in exploring the opportunity to offer its services in South Africa in these frequency bands, as earmarked by the NFAP, in partnership and cooperation with local companies.

Background on Omnispace

Omnispace is managed by veteran satellite industry executives and has investments from leading private equity firms and strategic partners with a successful track record in the wireless and satellite domains. Omnispace acquired spectrum rights and NGSO satellite network assets valued at over R10 billion ZAR to initiate mobile-satellite service (MSS) connectivity and is now investing in new technology and infrastructure as part of its next generation global constellation to provide hybrid 5G connectivity. Omnispace continues to advance the development of its 5G NTN and expand its 2 GHz spectrum footprint in key markets globally. The Omnispace network will power critical global

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communications, including 5G and mobile Internet of Things (IoT) connectivity, directly from its satellites in space to mobile devices around the world. Omnispace is building upon the investments it has already made to validate 3GPP standards-based 5G products and technologies and demonstrate 5G connectivity from space.

Omnispace is currently offering MSS capacity in various markets through its existing operational on-orbit F2 satellite network. The F2 satellite network is the first element of the NGSO constellation that will be capable of providing 24 x 7 coverage around the globe ("Omnispace System"). Omnispace plans to launch two additional satellites into space next year leading to the expansion of the Omnispace System.

Omnispace's hybrid MSS Complementary Ground Component system can provide a broad range of services, including a wide array of possible commercial and government communications services:

- **Industries**: Commercial MSS services to enterprises in oil, gas, mining, fishing, agriculture, etc.;
- **Connectivity**: Internet connectivity in maritime, and rural and remote areas;
- **Emergencies/Public Safety**: Communications during natural and man-made emergencies, as well as disaster warnings to the public and government agencies;
- **Internet of Things (IoT)**: Connected car applications, smart city (urban and rural), transportation and logistics (on-shore and off-shore);
- **Unmanned Aerial Vehicles**: Situational awareness for disasters such as fires, damage caused by weather events, delivery, insurance inspections, etc.;
- **Hybrid**: In areas that are lacking in coverage or capacity due to blockage or density; and,
- **Aviation Networks:** hybrid network that utilises both satellite and terrestrial networks to provide Internet access to airline flights.

Thank you again for the opportunity to provide comments on ICASA's "Draft National Frequency Plan 2021". In lieu of making an oral representation during the public hearings on September 7-9th, Omnispace would be interested in arranging a virtual meeting with ICASA to exchange perspectives on the S-band in South Africa for hybrid terrestrial mobile satellite connectivity. Please contact me for clarification or additional information. I look forward to further discussions.

Sincerely,

Molly Gavin

Vice President, International Regulatory and Spectrum Policy
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Comments from Omnispace on ICASA's Draft National Frequency Allocation Plan 2021

1980-2110 MHz Band / 2170-2200 MHz

Omnispace supports the allocations, applications, notes and comments outlined in the NFAP for the 1980-2110 MHz / 2170-2200 MHz band in South Africa. As noted in our introduction, Omnispace currently operates an MSS NGSO satellite system in this frequency band in line with ITU regulations and is investing in 5G NGN, an IMT satellite terrestrial hybrid technology. We are interested in exploring the provision of this service in South Africa with local partners.

Omnispace Recommendations

Omnispace recommends that ICASA make changes throughout the NFAP to update the reference to ITU Resolution 212 for WRC-19. Major changes were made to Resolution 212 at WRC-19 namely an annex was added, "Guidance on the implementation of technical and operational measures to facilitate coexistence between terrestrial and satellite components of International Mobile Telecommunications in the frequency bands 1 980- 2 010 MHz and 2 170-2 200 MHz". There are several references throughout the NFAP to Resolution 212 and these should all be updated accordingly to reflect the revisions made at WRC-19. We have highlighted three important areas to make this update below.

1) NF9 (IMT Frequency Bands - Terrestrial) (P.265)

Resolution 212 is referenced several times in this table and Omnispace simply recommends updating the reference to WRC-19.

2) NF13 reads as follows (P. 266):

NF13 (1980 – 2010 MHz paired with 2170 – 2200 MHz) These frequency bands are allocated, amongst others, to both the mobile and mobile-satellite services and are also earmarked for the satellite component of IMT. Further, the implementation of IMT in the bands 1885-2025 MHz and 2110-2200 MHz is under study within ITU-R in accordance with Resolution 212 (Rev. WRC-15)

Omnispace recommends this footnote be updated to reflect that Resolution 212 was updated at WRC-19 to include an annex entitled, Guidance on the implementation of technical and operational measures to facilitate coexistence between terrestrial and satellite components of International Mobile Telecommunications in the frequency bands 1 980- 2 010 MHz and 2 170-2 200 MHz". Our proposal is as follows:

NF13 (1980 – 2010 MHz paired with 2170 – 2200 MHz) These frequency bands are allocated, amongst others, to both the mobile and mobile-satellite services and are also earmarked for the satellite component of IMT. Further, guidance on the implementation of technical and operational measures to facilitate coexistence between terrestrial and satellite components of International Mobile Telecommunications in the frequency bands 1 980- 2 010 MHz and 2 170-2 200 MHz is addressed within ITU-R in accordance with Resolution 212 (Rev. WRC-19)

3) Footnote 5.388 (P.309) should be updated to reflect WRC-19. We propose the following minor changes:

5.388 The frequency bands 1 885-2 025 MHz and 2 110-2 200 MHz are intended for use, on a worldwide basis, by administrations wishing to implement International Mobile Telecommunications (IMT). Such use does not preclude the use of these frequency bands by other services to which they are allocated. The frequency bands should be made available for IMT in accordance with Resolution 212 (Rev.WRC-19) (see also Resolution 223 (Rev.WRC-19)). (WRC-19)