MTN'S RESPONSE IN RELATION TO THE NOTICE REGARDING THE DRAFT AMENDMENT OF THE RADIO FREQUENCY SPECTRUM REGULATIONS 2015 PUBLISHED ON GOVERNMENT GAZETTE 54677 DATED 15 MAY 2026

29 June 2026

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1. Introduction

Mobile Telephone Networks (Pty) Ltd ("MTN") wishes to thank the Independent Communications Authority of South Africa ("the Authority") for the opportunity to comment on the General Notice 3927 of Government Gazette No. 54677 in terms of which the Authority invites comments on the Draft Amendment of the Radio Frequency Spectrum Regulations 2015.

2. General Comments

MTN has noted some ambiguities in the Draft Amendment of the Radio Frequency Spectrum Regulations document that may cause confusion about the practical application of certain technical terms.

It is recommended that the Authority only use the words like system and network to describe a collection of individual terminals, stations or devices that are interconnected or linked together. However, these words (system and network) should not be used to define a single stand-alone terminal or device.

MTN has noted that the published Draft Amendment to the Radio Frequency Spectrum regulations is heavily focused only to Fixed Satellite Services (FSS). Mobile-Satellite Services (MSS) is another distinct satellite communication classification defined by the International Telecommunication Union (ITU) and has been advanced at World Radio Conference -23 (WRC-23) for facilitating direct space – to – device communication. It is recommended that the Authority also includes and make reference to MSS and the associated ITU resolutions and recommendations especially those related to spectrum allocations in the L and S spectrum bands, e.g. RESOLUTION 253 (WRC-23).

3. Amendment of regulation 1 of the Regulations

MTN welcomes the Authority's proposal to amend Regulation 1 of the Radio Frequency spectrum Regulations 2015 by inserting additional terms and their definitions.

3.1. Insertion of ''Astronomy Device''

MTN agrees with the insertion of the definition of ''Astronomy Device'' in the Draft Amendment of the Radio Frequency Spectrum Regulations 2015.

3.2. Insertion of "Earth Station"

MTN agrees with the insertion of the definition of ''Earth Station'' in the Draft Amendment of the Radio Frequency Spectrum Regulations 2015.

3.3. Insertion of "Earth Station in Motion (ESIM)"

MTN agrees with the insertion of the term of "Earth Station in Motion (ESIM)" in the Draft Amendment of the Radio Frequency Spectrum Regulations 2015. However, the proposed definition presents semantic ambiguity as it can be interpreted to be catering for Fixed Satellite Services (FSS) only.

To ensure that the definition provides practical certainty, MTN recommends that the definition be rephrased as.

> **"Earth Station in Motion (ESIM)"** Earth stations or terminal placed on moving platforms such as an aircraft (A-ESIM), ship (M-ESIM), or land vehicle (L-ESIM) that maintains continuous communication with geostationary-satellite orbit (GSO) or non-GSO systems.

This definition also includes **land vehicle (L-ESIM)** for land vehicles with broadband connectivity needs that can be met by ESIM include trains, coaches, vans, trucks and motorhomes. Land ESIM can provide connectivity throughout countries and may be particularly useful in areas without coverage by terrestrial networks[1]. Because they

[1] https://www.itu.int/pub/R-REP-S.2464

traverse borders and cross different countries, Land ESIMs pose unique challenges regarding interference with local terrestrial networks.

3.4. Insertion of "Management Authority"

MTN agrees with the insertion of the definition of "Management Authority" in the Draft Amendment of the Radio Frequency Spectrum Regulations 2025. To ensure that the definition provide certainty as it is specific to manage a particular astronomy advantage area, MTN recommends that the definition be termed as **" Astronomy Management Authority"**.

3.5. Insertion of "Network control and monitoring centre (NCMC)"

MTN agrees with the insertion of the definition of "Network control and monitoring centre (NCMC)" in the Draft Amendment of the Radio Frequency Spectrum Regulations 2015. MTN recommends that this definition be rephased as follows.

> **"Network control and monitoring centre (NCMC)"** - means a facility that provides permanent monitoring and control over the satellite terminals. It enforces regulatory compliance, prevent interference with other satellite network or terrestrial services, and remotely manage terminal operations across global borders.

This definition captures the overall functionalities of the Network control and monitoring centre which are not only limited to prevention of harmful interference but may include authenticating users, restricting connectivity in restricted area and even managing bandwidth.

3.6. Insertion of "Non-Geostationary Orbit Systems"

MTN recommends that the term be rephrased to "Non-Geostationary Orbit" to define a path (orbit) that a Non-Geostationary satellite follows as it moves continuously around the earth.

However, if the Authority intends to insert and use the term "Non-Geostationary Orbit Systems" in the Radio Frequency Spectrum Regulations 2015, MTN suggests that the definition be rephased as follows.

"Non-Geostationary Orbit System - means a system of satellites that are not stationary or fixed relative to the earth's surface. These satellites use a network of complementary orbits so that at least one satellite is always visible from any point on earth, ensuring uninterrupted coverage and connectivity to earth stations. There are many types of NGSO, such as Low Earth orbit (LEO), Medium Earth orbit (MEO), and High Elliptical orbit (HEO).

3.7. Insertion of "Orbit"

MTN agrees with the insertion of the definition of "Orbit" in the Draft Amendment of the Radio Frequency Spectrum Regulations 2015.

3.8. Insertion of "RICA"

MTN agrees with the insertion of the definition of "RICA" in the Draft Amendment of the Radio Frequency Spectrum Regulations 2015.

3.9. Insertion of "Space Segment"

MTN agrees with the insertion of the definition of "Space Segment" in the Draft Amendment of the Radio Frequency Spectrum Regulations 2015.

4. Other recommendations on Regulation 1

In the Findings document on the Consultation on the Proposed New Licensing Framework for Satellite Services" published on 17 April 2025, Gazette No. 52530, the Authority indicated that there was support for blanket licensing approach for network terminals from industry.

MTN recommends that the Authority adds **"Blanket Licence"** in Regulation 1 of the Radio Frequency Spectrum Regulations, and this should be defined as follows;

" **Blanket Licence**" - An authorisation that covers operation of multiple user terminals or devices provided they meet specified technical and operational standards, without requiring individual licences for each terminal".

5. Insertion of regulations 28A and 28B in the Regulations

5.1. Regulation 28A

In the Authority's Consultation on the proposed new Licensing Framework for Satellite Services, MTN was supportive of the Authority's proposal for a "List Authorised of Space Stations" registration regime as this ensures satellite operators are compliant with local regulatory frameworks. In this draft amendment, the Authority has proposed the insertion of 28B(1) and addition of "Form F" Radio Frequency Spectrum Regulations, signalling the intention to proceed with the implementation the "List Authorised of Space Stations" registration.

MTN, therefore recommends that regulation 28A(4) be rephrased to read as follows.

> *"Subject to sub-regulation (1), the Authority will not authorise ESIM's that are not linked to a satellite network filed with the ITU Radiocommunication Bureau according to Article 9 and 11 of the ITU Radio Regulations and not registered in the Authority's List of Authorised Space Segments".*

MTN also notes that in the proposed regulation 28A(6) by the Authority referenced ITU resolutions related to ESIMS communicating with geostationary space stations only. It is also recommended that **Resolution 123 (WRC-23) and Resolution 176 (Rev.WRC-23)** be included in regulation 28A(6) to ensure compliance of ESIMS communicating with non-geostationary space stations.

5.2. Regulation 28B

As mentioned in section 2.4 above, to ensure certainty MTN recommends that "**Astronomy Management Authority**" be used in regulation 28B(3) instead of "Management Authority ".

6. Amendment of regulation 42 of the Regulations

MTN agrees with the amendment of regulation 24 by insertion of sub-regulation (9) after sub-regulation (8).

7. Insertion of Form F under Annexure A of the Regulations

MTN agrees with the amendment of the Radio Frequency Spectrum Regulations by insertion of Form F under Annexure A.

8. Addition of Annexure K, after Annexure J, of the Regulations.

MTN welcomes the Authority's proposal to add Annexure A of Radio frequency bands for ESIM and applicable provisions in the Radio Frequency Spectrum Regulations. However as noted in section 2 above, the proposed amendments are also focused on bands for FSS and not MSS bands. MTN recommends that the following spectrum bands be included in Annexure K of the Radio Frequency Spectrum Regulations.

- **L-Band (1.5 - 1.6 GHz)**: This bands is favoured for mobile communications and satellite phones. It offers excellent weather penetration and requires smaller, omnidirectional antennas.
- **S-Band (2.0 - 2.4 GHz):** This band has been harmonized globally for modern Direct-to-Device (D2D) and satellite Internet of Things (IoT) applications.

The L and S bands can be implemented as follows.

1) 1518-1525 MHz (space-to-Earth) paired with 1668-1675 MHz (Earth-to-space)

2) 1525-1559 MHz (space-to-Earth) paired with 1626.5-1660.5 MHz (Earth-to-space)

3) 1610-1626.5 MHz (Earth-to-space and space-to-Earth)

4) 2483.5-2500 MHz (space-to-Earth)

5) 1980-2010 MHz (Earth-to-space) paired with 2170-2200 MHz (space-to-Earth).

These L-band and S-band allocations are designated for the MSS in ATU countries[2]. Also,WRC-23 focused on enabling direct-to-device (D2D) communications and IoT data relay in these bands.

[2] https://atuuat.africa/atu-resource-centre/atu-r-information-papers/

MTN therefore recommends that the ITU Resolutions governing L & S Bands be added to Annexure K.

- **Resolution 225 (REV.WRC-23)**addresses the use of bands 1 518-1 544 MHz, 1545-1 559 MHz, 1 610-1 626.5 MHz, 1 626.5-1 645.5 MHz, 1 646.5-1 660.5 MHz, 1 668-1 675 MHz and 2 483.5-2 500 MHz by administrations wishing to implement the satellite component of IMT.
- **Resolution 222 (Rev.WRC-23):** addresses the use of frequency bands 1525–1559 MHz and 1626.5–1660.5 MHz by the mobile-satellite service (MSS)
- **Resolution 774 (WRC-23):** Dictates sharing and protection criteria for space research, Earth exploration-satellite services (EESS), and MSS in the S-band, particularly regarding co-existence with terrestrial IMT deployments.