



CHANGE YOUR WORLD

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30 January 2023

The Independent Communications Authority of South Africa
350 Witch-Hazel Avenue,
Eco Point Office Park,
Eco Park, Centurion, Gauteng.

Attention: Mr Bethuel Nkgadime

By email: BNkgadime@icasa.org.za

Dear Sir,

NOTICES OF INTENTION TO AMEND ANNEXURE B OF THE RADIO FREQUENCY SPECTRUM AMENDMENT REGULATIONS, 2021

1. Cell C Limited ("Cell C") would like to thank the Independent Communications Authority of South Africa ("ICASA") for the opportunity to provide written comments to the draft Annexure B of the radio frequency spectrum amendment regulations (**the Regulations**), published for consultation in *Government Gazette 47792* on 21 December 2022.
2. Cell C understands that the Regulations proposes the incorporation of the lower 6 GHz (5925 – 6425 MHz) and the 122 – 246 GHz radio frequency bands for Non-Specific Short-range Applications. In addition, this will provide a much-needed boost for Wi-Fi availability and uptake, and it is expected to enable faster data communications between devices connected to wireless infrastructure, reduce latency, improve efficiency and data throughput.
3. Cell C welcomes and looks forward to further engaging with ICASA on the Regulations. Accordingly, please find below our written submission in this regard.

Cell C hereby confirms its readiness to participate in any subsequent consultations and oral hearings, which may be called for by ICASA.

Yours sincerely

Themba Phiri
Executive Head: Regulatory Affairs
Cell C Limited

CELL C WRITTEN COMMENTS ON THE DRAFT AMENDED ANNEXURE B OF THE RADIO FREQUENCY SPECTRUM AMENDMENT REGULATIONS, 2021 FOR PUBLIC CONSULTATION

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1. GENERAL COMMENTS

- 1.1. Cell C would like to thank ICASA for the opportunity to present these written comments and requests the opportunity to both elaborate on the points below in Table A as well as to raise further points via oral submission when public hearings are convened on the Regulations.
- 1.2. In general, Cell C supports and recommends the alignment of these proposals with the various resolutions/recommendations as adopted at various international, regional, and national levels (ITU, ATU and SADC), including those arising from the ITU World Radio Conferences. This means the same spectrum bands are used country to country, which allows the same equipment, including devices, to be sold across large regions, bringing down the cost to communicate and thereby benefitting from economies of scale.
- 1.3. In finalizing the Regulations, the migration of affected licensees including government entities and organizations must follow the process as prescribed in the ECA where relevant. The development of the subsequent “RFSAP” and the Frequency Migration Plan (“FMP”) are overseen by different rulemaking provisions. Therefore, there must be no areas of ambiguity, inconsistency, or wrongfully placed spectrum events between the processes. Thus, avoiding protracted delays due to unnecessary litigation.
- 1.4. Cell C recommends that the inclusion of the lower 6Ghz band and the 122-146 GHz bands for Wi-Fi use be prescribed in a manner that is consistent with the ECA. No migrating licensees should unfairly benefit or treated in a manner that compromises competition in the sector. Any decision taken by ICASA must be informed by robust consultation with affected licensees whilst considering the existing use and value of the affected spectrum bands.

2 TABLE A

Band	Proposed use of band	Affected Stakeholders	Comments
5925 – 6425 MHz	Cell C conducted a quick desktop study and found that this band was adopted in 31 countries including South Africa for enabling WiFi-6E technologies to be used. (https://www.wi-fi.org/countries-enabling-wi-fi-in-6-ghz-wi-fi-6e).	2021 SA NRFP – status: “5925-6 425 MHz <i>FIXED 5.457 NF14</i> <i>FIXED-SATELLITE (Earth-to-space) 5.457A 5.457B</i> <i>MOBILE</i> Typical applications: Fixed links - Lower 6 GHz (5925-6425 MHz) BFWA Fixed-satellite uplinks (PTP/VSAT/SNG) (5850-6425 MHz) ESVs (5925 – 6425 MHz) Radio astronomy (observation of Methanol)” The frequency band 5925 to 6425GHz (FDD) is assigned to Telkom for PtP links in rural and polygon areas. This band is available in urban areas on a co-ordinated basis only. (Source- ICASA “Spectrum -Usage-Availability -Q1-2019” Report”	Cell C supports in principle the adoption of the lower part of the 6GHz frequency band to be assigned for WiFi-6E applications such as Wireless Access Systems and Radio Local Area Networks to provide for the affordable means of communication for the SA public in general under the provision of Non-Specific Short-range Applications. The demand for Wi-Fi services will increase and the traffic grow exponentially which will place a huge burden on the existing ISM bands. This band should be made available both for WiFi applications including other ISM applications. Cell C recommends that these Wi-Fi applications form part of the license exempt (ISM) band, as an extension of the current 5GHz band allocated for ISM technologies which is subsequently also being used for Wi-Fi applications. Cell C notes through the following article prepared by Policy Impact Partners Ltd. on behalf of the 6 GHz Coalition that the economic value generated by Wi-Fi is estimated to be approximately \$44Billion by 2025. (https://6ghz.info/wp-content/uploads/2022/07/Delivering-Wi-Fi-in-6GHz-Africa.pdf). Therefore, there is a huge economic benefit for South Africa in making the lower 6GHz available for Wi-Fi use. The device ecosystem is mature as many devices are already supporting the WiFi-6E specification as indicated in this report. Further to support the device ecosystem readiness, Wi-Fi Alliance projects that 350 million Wi-Fi 6E devices will be sold globally in 2022. (https://www.wi-fi.org/download.php?file=/sites/default/files/private/Wi-Fi Alliance Wi-Fi 6E Insights Newsletter 202207_0.pdf) The existing Telkom services in this band will need to be migrated nationally to another suitable band to clear this spectrum in order to make provision for WiFi6E technologies and services.

122 – 246GHz	This band is primarily allocated for the following as contained in the 2021 NRFP: • Fixed-Satellite (Space-to-Earth) • Mobile-Satellite (Space-to-Earth) • Radio-Navigation • Radio Astronomy • Space Research (passive) • Mobile 5.558 ISM (122 – 123GHz and 244 – 246GHz)	Users in this band is not defined in the 2021 NRFP or the ICASA “<i>Spectrum -Usage-Availability - Q1-2019</i>” Report”.	Cell C supports in principle the inclusion of ISM applications in this band using Non-Specific Short-range technology. The ITU designated the 122-123GHz and 244-246GHz as published in article 5.138 for the provision of ISM applications which is subjected to conditions as outlined in article 15.13 to ensure no harmful interference is generated by these devices. https://search.itu.int/history/HistoryDigitalCollectionDocLibrary/1.43.48.en.101.pdf. It is unclear to Cell C where in this band ICASA plans to assign the frequency block/blocks for Non-Specific-Short-Range usage. Cell C therefore seeks clarity hereof. NB: Caution must be drawn where users need to take into account the SKA project in the Northern Cape which need to be considered when any new RF planned applications are introduced in this SKA designated geographic area. http://www.scholarpedia.org/article/Square kilometre array https://www.skao.int/en/science-users/118/ska-telescope-specifications. There are many industry OEMs such as Nokia, Qualcomm, Rogers, TELUS, VEGA, Robert Bosch GmbH and the mmWave Coalition which shows tremendous interest in the development of the 95GHz band up to 260GHz for various applications such as low power backhaul systems, ultra-wide band radiodetermination, radar sensors, industry automation, level probing and indoor surveillance. From our desktop study it seems that industry is positioning itself to be ready for commercial trial within 3 years and the device ecosystem maturity will follow soon. https://ised-isde.canada.ca/site/spectrum-management-telecommunications/en/learn-more/key-documents/decision-technical-and-policy-framework-frequency-bands-above-95-ghz
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