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12 January 2024

Mr Manyapelo Richard Makgotlho
Independent Communications Authority of South Africa
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Per email: rmakgotlho@icasa.org.za
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CC: chairperson@icasa.org.za

Dear Mr Makgotlho,

RE: TELKOM'S WRITTEN SUBMISSION ON THE DRAFT AMENDMENTS TO THE RADIO FREQUENCY SPECTRUM ASSIGNMENT PLAN FOR THE IMT2300 BAND

Telkom SA SOC LTD ("**Telkom**") welcomes the opportunity to provide written comments on the draft amendments to the radio frequency spectrum assignment plan for the IMT2300 band, published on 24 November 2023 in Government Gazette 49757, Notice 4105 of 2023 ("**draft amendments**").

Telkom wish to participate in a public hearing process, if the Authority determines that this is needed.

Please find herewith Telkom's written comments, which we trust will assist the Authority in finalising these regulations.

Yours Sincerely



Nozipho Mngomezulu
Group Executive: Regulatory and Legal Affairs

Telkom Submission

Draft amendments to the Radio Frequency Spectrum Assignment Plan for the IMT2300 frequency band

1 SPECIFIC COMMENTS

1.1 Ad section 5.6 (Maximum radiated power)

There are several issues in this section to be addressed before finalising the IMT2300 Radio Frequency Spectrum Assignment Plan (“**RFSAP**”).

In sub-regulation 5.6.1 of the RFSAP, the Authority refers to CEPT Report 67. This report however relates to the frequency band 3400-3800 MHz (“*Review of the harmonised technical conditions applicable to the 3.4-3.8 GHz ('3.6 GHz') frequency band*”) and is therefore not relevant to the 2300-2400 MHz frequency band (i.e. IMT2300). This reference must therefore be deleted. A more suitable reference is CEPT Report 55 (“*Harmonised technical conditions for the 2300-2400 MHz ('2.3 GHz') frequency band in the EU for the provision of wireless broadband electronic communications services*”). Alternatively, reference could be made to ECC/DEC/(04)02 (“*Harmonised technical and regulatory conditions for the use of the band 2300-2400 MHz for Mobile/Fixed Communications Networks (MFCN)*”).

In referencing either of these documents, care should be taken to refer only to the relevant parts namely the specification of the maximum power levels of base stations (“**BS**”) and user equipment (“**UE**”). Both these documents also include issues such as the use of Licence Shared Access (“**LSA**”), which is not applicable to South Africa.

Sub-regulation 5.6.2 states: “*Total Radiated Power (TRP) limit for Active Antenna Systems (AAS) envisaged for IMT2020 base stations in the assignment plans*”. This statement seems incomplete and creates several uncertainties in terms of its intention and application.

- Firstly, no Total Radiated Power (“**TRP**”) has been stipulated for base stations in the RFSAP, so implementation of such is not possible. In this regard, Telkom is of the view that the intention is to implement a TRP limitation on BSs operating in the sub-band 2390-2400 MHz, as also provided for in CEPT Report 55. CEPT Report 55 specifies an in-block EIRP limit of 45 dBm/5 MHz applicable to the sub-band 2390-2400 MHz to ensure compatibility with Radio Local Area Networks (“**RLAN**”, e.g. Wi-Fi systems) operating above 2400 MHz. This additional power limit applicable in the sub-band 2390-2400 MHz is needed to provide protection of RLAN systems operating above 2400 MHz. In this case, the EIRP is specified as TRP applicable to base stations deployed in this sub-band. Specifying this upfront in the IMT2300 RFSAP is important in the context of the anticipated licensing process.
- Secondly, TRP is referenced in footnote 8 of the IMT2300 RFSAP, which is associated with mobile stations (sub-regulation 5.6.4). In this footnote, there are seemingly contradictory statements namely: “...Total Radiated Power (TRP) limit for AAS base stations...” and “...TRP specifications are only allowed for and provided for mobile stations” (own emphasis). This creates uncertainty as to the application of TRP for BSs and/or UEs.

In addition, sub-regulation 5.6.3 provides for mobile stations (i.e. UE’s) to be limited to an EIRP not exceeding 23 dBm. Sub-regulation 5.6.4 provides for a maximum TRP of 25 dBm also

applicable to mobile stations. Telkom recommends that the UE limit be aligned with CEPT Report 55 namely an upper limit of 25 dBm for the in-block power for UE, noting that this includes the +2dB tolerance as also provided in 3GPP TS 36-521-1. This power limit is specified as an EIRP for fixed or installed UEs and as a TRP for mobile or nomadic stations. See sub-section A2.2 in CEPT Report 55.

Furthermore, CEPT Report 55 provides for the application of a Block Edge Mask (“**BEM**”) to allow the shared use of mobile networks in adjacent assignments. In this regard, Figure 2 as contained in CEPT Report 55, applies to the South African context of mandatory synchronous networks. The relevant Transitional and Base Line limits applicable are provided in CEPT Report 55. Base line limits are provided in Table 2 of the report with Additional base line limits in Table 3. Transitional region requirements are provided in Table 4 of the report.

Based on the above, Telkom recommends that regulation 5.6 be amended to align with CEPT Report 55. This is needed to ensure regulatory certainty and to support shared use within the band between IMT networks as well as protection of RLAN systems operating above 2400 MHz.

1.2 Ad section 8 (Assignment)

As per sub-regulation 8.1, “*The spectrum band 2300 MHz to 2400 MHz will be assigned through an Invitation to Apply in line with regulations developed in terms of section 31(3) of the Act*”. Whereas this is correct in the context of the band, it must be clearly stipulated that only available spectrum will be licenced as the band 2300-2360 MHz is already licensed to Telkom and will therefore not be part of the anticipated future licensing process.

Telkom therefore recommends the following changes:

“The available spectrum in the band 2300 MHz to 2400 MHz will be assigned...”.

1.3 Ad section 9 (Amendments)

In terms of sub-regulation 9.1, existing fixed service licensees will have their licences amended and be moved to a different designation band. The time required for implementing this administrative process is not clear and will depend on several factors including the identification of a suitable designation frequency band. Telkom understands that this process will be done in accordance with section 7 of Part 1 of the Radio Frequency Migration Plan, 2019 (GG42337, Notice 166 of 2019, 29 March 2019), which outlines the necessary steps to be followed in this regard.

According to sub-regulation 9.2 of the IMT2300 RFSAP, migration of fixed links and outside broadcasting links are intended to be completed by 31 March 2024. This will be after the steps as outlined in sub-regulation 9.1, as discussed above. Furthermore, in accordance with sub-regulation 6.1, this RFSAP comes into effect on the date of publication, which date is also not yet known and will depend on, amongst others, the completion of the current consultation process, which may also include public hearings if deemed necessary. Proposing a specific and fixed date of 31 March 2024 therefore seems inappropriate and inadequate.

In addition to the above, the consultation of the next spectrum licensing process, which may include the available spectrum in the IMT2300 band, has not yet started. Telkom remains of the view that considerable time will be needed to prepare, design, and implement such a licensing process (which includes the option of an auction) noting the need for a competition assessment also considering the spectrum obtained in the 2022 spectrum auction, the consideration of spectrum secondary markets, etc.

Based on the above, Telkom recommends that the date of 31 March 2024 be changed to 31 March 2025, or as a minimum to 31 December 2024 noting that the completion of the new licensing process prior to December 2024 is highly unlikely. Alternatively, this date should be aligned with the projected date of the planned licensing process as any earlier date is not necessary or required.

1.4 Ad section 10 (Radio Frequency Migration)

In line with Telkom's comments in section 1.3 above, Telkom recommends that the stipulated dates be extended accordingly.

In terms of sub-regulation 10.2, Aeronautical Mobile Flight Testing in FAR147 is excluded from the proposed migration date of 31 March 2024. As per sub-regulation 10.3 requires that activity undertaken in FAR147 be undertaken through a co-ordinated procedure, which Telkom could support. In line with the proposal as per sub-regulation 10.4, Telkom and the relevant government entities are currently implemented such coordination; a formal coordination agreement could be submitted as proposed.

Notwithstanding the above, Telkom is of the view that use of the band for Aeronautical Mobile Flight Testing, which is non-IMT, should not be retained indefinitely. Therefore, the IMT2300 RFSAP should indicate an anticipated end-date, when this non-IMT application is migrated to another suitable band. Whereas the current coordination procedure is working well, going forward, Telkom anticipates the need for more use of this band for wireless broadband services in the area.

THE END