



03 December 2021

Independent Communications Authority of South Africa

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Centurion

Gauteng

Attention: Mr. Manyapelo Richard Makgotlho

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**SUBMISSION: INQUIRY REGARDING THE IMPLEMENTATION OF THE RADIO FREQUENCY MIGRATION
PLAN AND THE INTERNATIONAL MOBILE TELECOMMUNICATIONS (IMT) ROADMAP**

1. Liquid Intelligent Technologies (“**Liquid**”) refers to the Inquiry regarding the implementation of the Radio Frequency Migration Plan and the International Mobile Telecommunications (IMT) Roadmap (“the **RF Migration plan & IMT Roadmap**”), published by the Authority as General Notice 580 in Government Gazette No. 45247 of 30 September 2021 and to the Authority’s invitation to comment thereon.
2. Liquid has set out its submissions on the RF Migration plan & IMT Roadmap below.

850 MHz

3. Liquid has engaged extensively and at length with the Authority regarding the spectrum assigned to it in the 850 MHz band. Relevant correspondence, submissions and presentations are in the possession of the Authority, and we provide here only a summary:

- 3.1. This spectrum was originally assigned to Transtel on a test basis before being assigned to Liquid (then Neotel) as the only available sub 1 GHz spectrum suitable for coverage.
- 3.2. Since assignment Liquid has been compelled to operate under severe spectrum restraints in this band due to:
 - 3.2.1. Interference from high power analogue television transmitters that are on-air.
 - 3.2.2. Interference caused to short-range devices (SRDs) and to and from mission-critical GSM-R systems.
- 3.3. As a result, Liquid has been unable to roll out services in cities and towns throughout South Africa.
- 3.4. IMT 850 is not a feasible band in a harmonized Region 1 IMT band planning environment, resulting in numerous impediments to use, including a lack of cost-effective CPE and radio apparatus and the impossibility of cost-effective carrier aggregation.
- 3.5. The current spectrum assignment is not sufficient for an effective data service.
4. These facts have been brought to the attention of the Authority on multiple occasions, without result. Prior proposals to migrate to a usable band have not been responded to by the Authority.
5. Notwithstanding efforts to deploy CDMA technology and to utilise this spectrum, Liquid has – for the reasons set out above – ceased use of the 850 MHz spectrum.
6. Liquid notes that its engagement with the Authority regarding an alternative destination band to migrate to falls within the Frequency Migration Plan but is also distinct from it.
7. As regards its migration to a destination band Liquid submits that the following principles apply:
 - 7.1. In migrating spectrum and specifying technologies that must, or may not, be used the Authority must have regard to the spectral efficiency of the technologies in the relevant band.
 - 7.2. In any migration it is not sufficient to match 1 MHz of spectrum in one band with 1 MHz in another band, but regard must be had to what can be accomplished by that 1 MHz of spectrum in one band using a technology already in use and match it to the spectrum needed to achieve the same results using a different technology and in a different band.
 - 7.3. The approach taken in the “Radio Frequency Spectrum Assignment Plan: Rules for Services operating in the Frequency Band from 825 to 830 MHz and 870 to 875 MHz” amounts simply to a temporary adjustment of the assignment, without due regard to relative spectral efficiency and market conditions.

Liquid's request

8. As raised in its discussions with the Authority and in the one-on-one consultation held on 17 November 2021 in relation to this process, Liquid seeks the following commitments from the Authority:
 - 8.1. A documented and agreed process with clear timelines.
 - 8.2. Spectrum fees to be waived.
 - 8.3. Migration to be considered on a "value for value" basis, considering the current and future value of the spectrum.
9. Liquid is preparing a further proposal for the Authority regarding possible destination bands and will continue to engage with the Authority in this regard.

Conclusion

10. Liquid extends its appreciation to the Authority for its consideration of these comments and trusts that these be of assistance to the Authority.
11. Should the Authority hold oral hearings or workshops, Liquid hereby gives notice of its intention to participate.

Yours faithfully



Valencia Risaba

Chief Corporate Affairs Officer