



Our Ref No: 16993

The Independent Communications Authority of South Africa
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For Attention: Mr. Manyapelo Richard Makgotlho

Per Email: rmakgotlho@icasa.org.za

Dear Mr Makgotlho

COMMENTS: SECOND DRAFT FREQUENCY MIGRATION REGULATIONS AND RADIO FREQUENCY MIGRATION PLAN

1. Transnet SOC Ltd ("Transnet") wishes to express its appreciation for being afforded the opportunity to comment on the Second Draft Frequency Migration Regulations and Radio Frequency Migration Plan (hereinafter referred to as the "Second Draft") published in Government Gazette No 36031.
2. It has been noted that little has changed from the original regulations. Therefore Transnet wishes to reiterate its position as contained in the Transnet submissions (attached hereto marked "A") to ICASA on the original regulations.
3. Please find our comments below.

3.1 Specific comments

The Second Draft's Migration Plan

(a) Ad item 2.1.3:

3.1.1 The position of multi-year licences should be covered more comprehensively. In this regard it is proposed that a particular engagement process should be required at a particular stage before the expiry of a multi-year licence to avoid potential disruptions in electronic communications and prolonged contestation. In this regard it may be reiterated that licensees have a legitimate expectation under section 11 of the Electronic Communications Act, 2005 that their licences would be renewed if they comply with licence conditions, the provisions of the Electronic Communications Act and related legislation. Consequently, licencing may be of unlimited duration, albeit by way of regular licence renewal.

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(b) Ad item 3.2:

3.1.2 The following statement is made: "The first consultation highlighted the need in some cases to carry out a feasibility study on the band in question." However, it should be pointed out that the need for a feasibility study applies to the whole migration plan. Such a feasibility study should also include a comprehensive cost benefit analysis, which analysis would not only consider the cost impact on users of a particular frequency band, but should also consider the overall cost to South Africa as a whole. Put in other words, the costs related to a particular migration initiative may outweigh the benefits of the migration by far.

3.1.3 The need to conduct a feasibility study in respect of the whole frequency migration plan is further underscored by the fact that destination bands for out-migrating incumbents are not reflected in many instances. Consequently, it is not possible to determine whether proposed migration initiatives would ensure feasible and continued electronic communication services that are already in existence. (Cf. comments below in paragraph (k)). The lack of identified destination bands in all instances also deprives ICASA of the benefit to consider all the implications of the frequency migration plan and the consequences for the country as a whole due to the inability of stakeholders to comment on unknown information and consequences. Consequently, the statement that "[i]t cannot be a requirement of the Frequency Migration Plan that destination bands for out-migrating users or uses be identified because the appropriate destination band will vary from user to user depending on their specific requirements of the user (sic)", cannot be supported. The frequency spectrum is limited and certain technologies are either not yet available or are not yet stable. If destination bands are not proposed, it is not possible to determine whether a destination band would be available and usable when out-migration is supposed to take place.

(c) Ad item 3.3.2:

3.1.4 The suggestion that the technological life-cycle of equipment is today shorter than in the past cannot be supported. In terms of applicable accounting rules and practices the economic lifespan of equipment is longer than the five years referred to. For purposes of the International Financial Reporting Standards (IFRS) applied by Transnet, a lifespan of seven years is allocated for radio infrastructure, and such timeframes should be reflected in the Second Draft.

(d) Ad item 3.3.3:

3.1.5 It should be reiterated that the aspect of "band planning" as an essential element of "adequate forward planning" and by implication dictates that proposed destination bands should be reflected in a frequency migration plan, i.e. the "from and to" principle.

(e) Ad item 3.3.4:

3.1.6 The timeframe of 3-5 years for spectrum migration should be reconsidered in view of various other time factors that impact negatively on the mooted timeframe. These additional time factors may be summarized as follows:

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- 3.1.6.1 The economic life span of equipment for accounting purposes in seven years.
- 3.1.6.2 Applications for Environmental Authorisations take three to four years to be processed.
- 3.1.6.3 Where dual illumination would be required, vacating an existing frequency band may be delayed for the creation of a vacant destination band.

3.1.7 In so far as Transnet is concerned, the need to extended timeframes is also informed by the following:

- 3.1.7.1 Transnet operates a fleet of 2200 locomotives at a cost of R30 million each. Each locomotive is fitted with two to five purpose designed low profile DC-Ground antenna systems which are specially designed to ensure optimum Radio Frequency (RF) performance whilst ensuring safe operations under the traction voltages of up to 50KV. These antennae were developed over a period of seven years, and the development and testing of a new antenna design to meet the requirements of a new frequency band may require similar timeframes.

(f) Ad item 4.1:

- 3.1.8 Although the statement is made that "[t]his Second Draft Frequency Migration Regulation and Frequency Migration Plan have taken account of the industry submissions insofar as they relate to Frequency Migration", it is a matter of concern that the Second Draft does not reflect changes in ICASA's position as a result of the potential impacts and solutions identified by stakeholders. As a result it is difficult to focus comment on the Second Draft in the absence of any indication whether a position presented to ICASA is acceptable to the Authority or not.

(g) Ad item 4.7:

- 3.1.9 The Second Draft seems to suggest that the ITU has identified the 450-470 MHz frequency band primarily and only for International Mobile Telecommunications ("IMT"), and that ICASA is as a result pursuing the clearing of this frequency band for IMT purposes at all costs. This view of ICASA cannot be supported.
- 3.1.10 If regard is had to the ITU Radio Regulations Footnotes it is clear that the World Radio Conferences ("WRC") do not regard IMT as a primary user of this frequency band, and that regional regulatory authorities are given a wide discretion to determine usage in this frequency band. Footnote 5.286AA is of particular relevance, and reads as follows:
 - "5.286AA the band 450-470 MHz is identified for use by administrations wishing to implement International Mobile Telecommunications (IMT). See Resolution 224 (Rev. WRC-07). *This identification does not preclude the use of this band by any application of the services to which it is allocated and does not establish priority in the Radio Regulations. (WRC-07)*" (own emphasis).
- 3.1.11 However, the implication arising from this footnote is that if the current users within this frequency band are accommodated within the band (as proposed by Transnet in this original submission), ICASA would have to facilitate the harmonisation within this band with neighboring countries.



3.1.12 Transnet is of the opinion that the 450-470 MHz band should not be viewed as a single unit as major granularity is lost. This singular view does not allow for the inclusion and consideration of the ITU-R M.1036 recommendations regarding the co-existence of different users and technologies in this Band. This is also particularly important for regional harmonisation.

(h) Ad item 4.8:

3.1.13 As indicated in the previous paragraph, ICASA has a wide discretion regarding the deployment of IMT within the 450-470 MHz frequency band. Consequently, it is suggested that a qualification be included under the heading "Mobile broadband" to this effect.

3.1.14 It should be pointed out in respect of the "Public Safety" bullet under this item that a distinction is to be drawn between "public safety" and "operational execution with high safety requirements and features." Transnet falls in the latter category as explained in its original submission to ICASA, and should not be regarded as part of "public safety services".

(i) Ad item 4.9:

3.1.15 The entries in the table row that addresses the 450-470 MHz frequency band should be qualified by a reference to Footnote 16 of Resolution 224 of the WRC.

(j) Ad item 4.10.12:

3.1.16 It would be appreciated if ICASA could provide clarity and confirmation that the two statements "There is no migration planned in the PMR sub-band" and "The rest of the users in this band can remain as-is" mean that there would be no migration of fixed wireless links.

(k) Ad item 4.10.13:

3.1.17 This item indicates a destination band for fixed link but is silent on the destination band for mobile application. However, if it is ICASA's intention to also migrate mobile applications to the above 3GHz band, it must be strongly emphasized that such equipment does not exist, and if the equipment is developed in future, the cost and amount of infrastructure required at this very high frequency will be prohibitive and cannot be supported.

3.1.18 As indicated in paragraph (g) above, the WRC resolution to allocate this frequency band to IMT is qualified, providing ICASA with discretion to accommodate current users and uses within the frequency band. In exercising this discretion, ICASA is requested to consider the different options proposed by Transnet in its original submission favorably. Where any of the current users and uses remain in this frequency band, ICASA must facilitate harmonisation with neighboring states.

3.1.19 In so far as ICASA appears to be amenable to the conducting of a feasibility study, clarity is required as to who would take ownership for such feasibility study and who would bear the costs thereof



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3.1.20 In view thereof that Transnet questioned the methodology and findings of a previous spectrum audit in its original submission, it is suggested that the validated methodology for a new assessment of usage levels be agreed with all affected parties.

(l) Ad item 4.11:

3.1.21 Clarity is required as to whether frequency bands that are not reflected in the consolidated list of new ICASA proposals are still open for discussion and input.

(m) Ad item 5.1:

3.2 General Comments

3.2.1 The second draft does not reflect the knock-on effect and associated implications of a frequency migration exercise. It stands to reason that the current incumbent of a destination band must first vacate the band before the migrating entity can take up the frequency band in question. Unfortunately, electronic communications cannot always be rolled out by the switch of a button and the following concerns regarding the principles of migration must be raised:

3.2.1.1 The second Draft does not adequately address the issue of dual illumination to ensure a seamless migration for users;

3.2.1.2 Where dual illumination (in other words operating two networks simultaneously during the transition phase) would be required to ensure a seamless migration, clarity is required regarding the payment of licence fees. Would such licencees be required to pay double licence fees during any period of dual illumination? and

3.2.1.3 Provision should be made for the processing of environment assessments and applications for authorisations where a migration initiative would require an environmental authorization for new communications infrastructure, otherwise the whole migration exercise may be defeated. It also goes without saying that the processing of environmental authorisations would affect the envisaged timeframes for migration initiatives

4. We thank you for this opportunity to comment on the Bill. We trust that our submission will assist.

Kind regards

Brian Molefe

Group Chief Executive

Date: 7.2.13.

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