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3 February 2017

Mr Manyapelo Richard Makgotlho
ICASA
Pinmill Farm
Block A
164 Katherine Street
Sandton
South Africa

Via Email: rmakgotlho@icasa.org.za

Dear Sir,

RE: NOTICE OF ICASA TO REVIEW THE NATIONAL RADIO FREQUENCY PLAN
COVERING THE RANGE 8.3 KHZ TO 3000 GHZ AS PUBLISHED IN
GOVERNMENT GAZETTE 40480 DATED 9 DECEMBER 2017

MTN would like to thank the Authority for the opportunity to comment on the above
notice and herewith submit our comments.

Furthermore, MTN records that it wishes to make an oral presentation to the
Authority.

Yours faithfully,

A handwritten signature in black ink, appearing to read 'Geoff Blake', with a long horizontal stroke extending to the right.

Geoff Blake
Senior Manager: Technical Regulations & Mandated Provisioning
MTN (PTY) LTD

MTNs response in relation to the Notice of ICASA to review the National Radio Frequency Plan as published in Government Gazette 40480 dated 9 December 2016

3 February 2017

1. INTRODUCTION

MTN (Pty) Ltd ("MTN") wishes to thank ICASA for the opportunity to comment on General Notice 861 in terms of which the Authority invites comments on the proposed review of the National Radio Frequency Plan 2017 covering the range 8.3kHz to 3000 GHz as published in Government Gazette 40480 on 9 December 2016.

MTN, in principle, welcomes the review of the National Radio Frequency Plan and appreciates the extensive work done by ICASA in as far as the review of the National Radio Frequency Plan is concerned.

MTN is however concerned that the proposed National Radio Frequency together with its Annexures are not compliant with the Electronic Communications Act, 36 of 2005 (ECA) and that, in its current format, it would not fulfil the purpose the ECA intends it to fulfil.

In light of the aforementioned MTN's comments comprise of two sections, namely:

- General Comments regarding to form and content
- Specific comments on specific provisions of the National Radio Frequency Plan

2. GENREAL COMMENTS REGARDING PERTAINING TO FORM AND CONTENT

2.1 Purpose of Proposed Frequency Band Plan

It is clear from section 34(6) that the ECA regards the National Radio Frequency Plan as an indispensable tool that has to:-

- enable ICASA to fulfil its statutory mandate and ensure the realisation of the ECA's objectives, as well as;
- enable operators and investors to identify opportunities for the introduction of new and innovative technologies and services which would ensure the widest choice in product and price for the consumer.

The National Radio Frequency Plan not only needs to be specific and comprehensive regarding the designation of radio frequency bands to be used for particular types of

services, but also sufficiently transparent and clear regarding the availability of clean and usable spectrum in the short, medium and long term.

MTN respectfully submits that the proposed National Radio Frequency Plan only addresses some portions of the above requirements and therefore does not comply with the above requirements and will unfortunately fail to achieve its purpose if promulgated in its current form. MTN's comments regarding specific shortcomings are set out in par 2.2 and 2.3 below.

2.2 Inclusion of a Migration of Plan

MTN respectfully submits that the proposed National Radio Frequency Plan is deficient and non-compliant with the ECA in light of the fact that it does not contain a migration plan.

The reason for this statement is that the definition of a **radio frequency plan** in section 1 of the ECA, provides that a radio frequency plan is a national plan that includes, but is not limited to -

- (a) a table of frequency allocations for all bands below 3000 GHz taking into account the ITU table of allotments, in so far as such allotments have been adopted and agreed upon by the Republic, which may include designations of certain utilisations; and
- (b) a plan, as applicable, for the migration of systems and equipment of existing users within specific radio frequency bands, including radio frequency bands for security services, to different frequency bands: (own emphasis added)

The above requirement is further recognized in section 34(7)(c)(iii) which mandates ICASA, when preparing a national Frequency Band Plan to

- (c) consult with the Minister to:
 - (i) co-ordinate a plan for migration of existing users, as applicable, to make available radio frequency spectrum to satisfy the requirements of subsection (2) and the objects of this Act and of the related legislation.

Although the Authority published a Migration Plan in 2013 through Government Gazette 36334, it is a requirement that such a plan is amended and updated in conjunction with the publication of a National Radio Frequency Plan. The

absence of a migration plan casts doubt on whether ICASA has indeed complied with the above statutory requirement. As such, the proposed plan as published only addresses half of the statutory requirements and could therefore in law not be seen as the final plan even if published in this format.

2.3 Specification of existing spectrum allocations and planned migrations

Section 34(6) sets out the requirements that the National Radio Frequency Plan has to comply with. It inter alia provides that the National Radio Frequency Plan must:

- (a) designate the radio frequency bands to be used for particular types of services;
- (b) ensure that the radio frequency spectrum is utilised and managed in an orderly, efficient and effective manner;
- (c) aim at reducing congestion in the use of the radio frequency spectrum;
- (d) aim at protecting radio frequency spectrum licensees from harmful interference;
- (e) provide for flexibility and the rapid and efficient introduction of new-technologies;
- (f) aim at providing opportunities for the introduction of the widest range of services and the maximum number of users thereof as is practically feasible. (Own emphasis added).

MTN respectfully submits that the proposed National Radio Frequency Plan only complies with section 34(6)(a), in that it merely designates the radio frequency bands to be used for particular services. The references to South African Allocations and Applications are however incomplete and lacks specifics regarding spectrum allocated, i.e. specifics regarding existing users (licensees), systems, equipment, specific spectrum allocated.

It is MTN's view that to determine compliance with the requirements set out in section 34(6)(b) to (f) would require that ICASA include sufficiently clear specifications regarding spectrum allocated (systems, equipment, existing users, specific spectrum allocated) in the National Radio Frequency Plan, i.e. to evaluate whether the National Radio Frequency Plan would ensure orderly, effective and efficient utilisation of spectrum or whether it provides for flexibility and the rapid and efficient introduction of new-technologies, thereby the widest range of services and the maximum number of users as is practically feasible. This would require that already existing spectrum

allocations are specified in the band plan and that a migration plan is included detailing required migrations together with timelines.

3. COMMENTS ON SPECIFIC PROVISIONS OF THE NATIONAL RADIO FREQUENCY PLAN

3.1 General Comments

A National Radio Frequency Plan provides the foundation for effective spectrum management. It provides a general plan for spectrum use and the basic structure to ensure efficient use of the spectrum and the prevention of interference between services. The designation of frequency bands for specific uses, by establishing a national frequency allocation plan, represents the first step in efficient and effective spectrum usage. ICASA must allocate frequency bands to the various radio services in accordance with national needs, but at the same time, base these allocations on the ITU Table of Frequency Allocations for Region 1, as contained in Article 5 of the ITU Radio Regulations.

However, there seems to a significant number of inconsistencies relating to Column 1 ITU Region1 allocations and footnotes. It is not the intention for MTN to highlight each inaccuracy but rather indicate an example of that inaccuracy. For example, page 274 – 275, the allocation of radio frequency band 862 – 890 MHz reflects fixed, mobile and broadcasting, all of which are allocated on a primary basis; however, for the band 790 – 862 MHz the allocation for broadcasting is not reflected.

In addition, in the third column, Typical Applications there are several instances where there is repetition of applications within a specified band, for example 450-455 MHz fixed links and IMT are repeated.

3.2 Comments on Specific Frequency Bands of Interest to MTN

470-694 MHz

In the final acts of WRC-15 under Section IV – Table of Frequency Allocations modification 5.296, the frequency band 470-694 MHz allocated in South Africa to land –mobile on a secondary service.

"is also allocated on a secondary basis to the land mobile service, intended for applications ancillary to broadcasting and programme-making. Stations of the land mobile service in the countries listed in this footnote shall not cause harmful

interference to existing or planned stations operating in accordance with the Table in countries other than those listed in this footnote. (WRC-15)”

MTN requests that the Authority ensures that this is reflected as such in Column 2 South African allocations and footnotes.

IMT 1500

South Africa has included 1427-1518MHz as an IMT band, which corresponds to a 3GPP supplementary downlink band called Band 32. In addition, it should be noted that South Africa was one of the countries that lobbied for this spectrum to be allocated to IMT services. However, the WRC-15 resolution called for member countries to allocate 1452-1492MHz for this band (which directly correlates with the 3GPP definition for Band 32), consequently, it is unclear which allocation the Authority intends to utilise.

3300 - 3 400 MHz

At WRC-15 an additional 100MHz in IMT3350 (3300-3400MHz) for IMT purposes. In the final acts of WRC-15 under Section IV – Table of Frequency Allocations modification 5.429A, the frequency band 3 300-3 400 MHz is allocated to the mobile, except aeronautical mobile, service on a primary basis.

“Stations in the mobile service operating in the frequency band 3 300-3 400 MHz shall not cause harmful interference to, or claim protection from, stations operating in the radiolocation service. (WRC-15)”.

The Authority has incorrectly associated footnote 5.430A next to mobile instead of 5.429A, the Authority is requested to ensure that this is reflected as such both Column 1 and 2.

3400 – 3600 MHz

In terms of the final radio frequency assignment plan Government Gazette 38640 published 30 March 2015, South Africa had committed to adopting the F1 option for IMT proposed by the ITU as depicted below

Frequency arrangements	Paired arrangements				Unpaired arrangements (e.g. for TDD) (MHz)
	Mobile station transmitter (MHz)	Centre gap (MHz)	Base station transmitter (MHz)	Duplex separation (MHz)	
F1					3 400-3 600
F2	3 410-3 490	20	3 510-3 590	100	None

Option F1 has been selected for South Africa and is depicted in the figure below:



However, in the current draft of the National Radio Frequency plan it appears that F2 is now being considered in contrast to previous regulations.

3600 – 3800 MHz

Within the 3600-3800MHz frequency band it should be noted that 3GPP has created Band 43 (TDD), consequently MTN believes that this should be reflected in Column 1 or a Mobile allocation on a Primary basis

5725–5850 MHz

UNII-3: This frequency band (5725–5850 MHz) is part of the 5GHz unlicensed spectrum, and is used for both Wi-Fi and LTE-U/LAA. The document states that we can use up to 4 Watt peak EIRP in this band, provided that we use frequency hopping or digital modulation. Although at this stage it is unclear whether manufactures of equipment (or devices) will be able to support 4 Watt EIRP, it is useful to know that we can theoretically increase the coverage area of LAA cells in the event that the network and device ecosystem can support it.