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15 February 2013

Mr Stephen Mncube
Chairperson
ICASA
Block B, Pinmill Farm
164 Katherine Street
Sandton

Via Email : chairperson@icasa.org.za

Attention : Manyapelapo Richard Makgotlho
Via Email : rmakgotlho@icasa.org.za

Dear Sir,

**RE: NOTICE OF ICASA TO REVIEW THE NATIONAL RADIO FREQUENCY PLAN AS PUBLISHED
IN GG 36025 DATED 21 DECEMBER 2012**

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 'Graham de Vries', written in a cursive style.

GRAHAM DE VRIES
GENERAL MANAGER: REGULATORY AFFAIRS
MTN (PTY) LTD

Directors PL Heinemann (Chairman) KW Pienaar (Managing Director)*, Z Bulbulia*, ZNA Cindi, RS Dabengwa,
R Gasant, IN Mkhize, NWC Molope, PD Norman, NI Patel, AJ Taylor

Company Secretary: MML Mokoka *Executive

Reg No. 1993/001436/07

Vat Reg. No. 4630140434



**MTN'S RESPONSE IN RELATION TO THE NOTICE OF
ICASA TO REVIEW THE DRAFT UPDATE OF THE
NATIONAL RADIO FREQUENCY PLAN AS PUBLISHED IN
GOVERNMENT GAZETTE 36025 DATED 21 DECEMBER
2012**

15 February 2013

1. INTRODUCTION

MTN (Pty) Ltd (“MTN”) wishes to thank ICASA for the opportunity to comment on General Notice 1060 in terms of which the Authority invites comments on the draft update of the National Radio Frequency Plan as published in Government Gazette 36025 on 21 December 2012.

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

MTN commends the Authority on its latest draft update of the National Radio Frequency Plan. It is apparent that significant comments by interested parties on previous versions of the Frequency band plan have been taken into account in that we note that the Frequency Migrations Plan has now been published a few days after the Band plan for comment. It is obvious that the Frequency Plan needs to be read in conjunction with a Migration plan regulation as well as the inclusion of ITU Radio Regulations Footnotes for ease of reference.

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

- General Comments
- Specific comments on specific provisions of the Frequency Band Plan

2. GENERAL COMMENTS

A National Frequency Band 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.

It is further noted that a significant number of bands have either been upgraded from secondary assignment to primary assignment for MOBILE services and further to this MOBILE assignments have been made that provides closer alignment with the ITU Table of Frequency Allocations for Region 1.

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.

It speaks for itself that to succeed in serving the above purposes the National Frequency Band 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.

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

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

MTN respectfully submits that it would however be beneficial if the Authority could indicate available spectrum for allocation within the relevant bands. It is suggested that ICASA would in addition to this highlight whether allocation of radio frequency spectrum within said band would be viewed as high demand spectrum or not.

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;*

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 -

- (iii) 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.*

Only on the conclusion of the publication of both the Frequency Band Plan and the Migration could it be stated that the above statutory requirement would have been satisfied. MTN commends the Authority for publishing the Migration plan as well.

3. SPECIFIC COMMENTS

450 – 470 MHZ

The channel arrangements in this band can accommodate both FDD and TDD, either standalone or a combination of FDD/TDD. In FDD mode, a single channel assignment of 4.4MHz up to 7.5 MHz is available, and in FDD/TDD, two assignments of 5 MHz FDD and 5MHz TDD are available in the band, or the entire band can be assigned a 20 MHz TDD channel.

MTN welcomes the MOBILE allocation to IMT450 and supports the migration of existing users to other bands. MTN recommends that the Authority adopts a channel plan that maximises the use of this frequency band, e.g. channel arrangement D9 in ITU-R recommendation M.1036. That recommendation is depicted hereunder.

Frequency Arrangements	Paired arrangements				Un-paired arrangements
	Mobile station transmitter(MHz)	Centre Gap (MHz)	Base station transmitter(MHz)	Duplex separation (MHz)	
D9	450.000 - 455.000	10.0	465.000 - 470.000	15	457.500 - 462.500 TDD

The Authority has already proposed to do a feasibility study of this band with regards to its current use and the subsequent migration of existing users out of this band. There's an acknowledgement that the use of this band is sparse, and this should give the regulator the necessary impetus to migrate existing users to other bands.

470 – 790 MHZ

Digital Dividend 2 band;

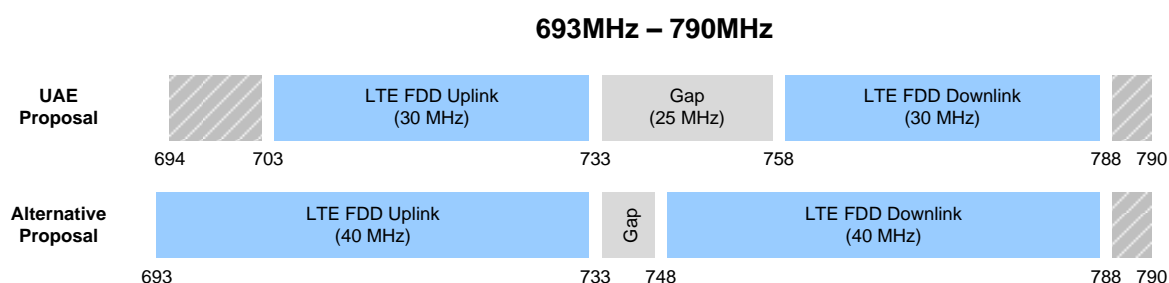
694 – 790 MHz falls within this band as defined at WRC '12.

MTN agrees that the band 694 – 790 MHz should be cleared of existing users and the allocation of this band to IMT700 on a primary basis. MTN suggests the migration of all BROADCAST services to below 694 MHz and the migration of studio links and other FIXED users of this band be moved to frequency bands above 3 GHz.

MTN is cognisant that the ITU is still in the process of defining an appropriate channel plan for the 700 MHz/800 MHz frequency bands for Region 1, but MTN believes that the second digital dividend provides the Authority an opportunity to a single migration of DD1 and DD2 simultaneously.

MTN is aware of a few proposal's for the new Region 1 700MHz DD band. Some of these band proposals have spectrum overlap with the current 800MHz DD band (3GPP band 20), MTN believes that it would be beneficial that the adopted channel plan of DD1 does not overlap the channel plan of DD2.

Possible channel plan options for Region 1 are as follows.



790 – 862 MHZ

Digital Dividend 1; WRC '07.

MTN suggests that the allocation and assignment of the 700 MHz and 800 MHz bands for IMT services need to be finalised in the meantime while ITU-R studies for an appropriate channel plan for the 700 MHz/800 MHz frequency bands for Region 1 are on-going.

862 – 890 MHZ

The band 880 – 890 MHz is part of E-GSM and is allocated to Cell – C.

The band 824 – 849 MHz paired with 869 – 894 MHz is the allocated to IMT850 (GSM850), previously allocated to Wireless Access Services. We agree that in South Africa the IMT850 band should not be used and allocations for IMT900 and IMT800 should take precedence over IMT850, and that current assignments in the 850 MHz band be moved to the 800 MHz band.

890 – 942 MHZ

Current allocation is MOBILE (IMT900) allocated on a primary basis. It should be noted that some RFID systems operate within this band between the Tx-Rx gap of the GSM900 band.

942 – 960 MHZ

MTN notes and agrees with the Primary allocation for MOBILE (IMT900).

1710 – 1785 MHZ (PAIRED WITH 1805 – 1880 MHZ)

MTN notes and agrees with the Primary allocation for MOBILE (IMT1800).

1920 – 1980 MHZ (PAIRED WITH 2110 – 2170 MHZ)

MTN notes and agrees with the Primary allocation for MOBILE (IMT2100).

2300 – 2450 MHZ

This band is currently allocated for FIXED and MOBILE services on a primary basis. Amateur and broadcasting links are currently allocated on a secondary basis. The ISM band; 2400 – 2483.5 MHz; falls within this band.

In principle, in a technology neutral environment such as is applicable in South Africa, a frequency licensee ought to be able to use any technology or standard as long as that technology or standard is within the allocation as determined by the Authority and/or the ITU. However, where the new utilization of the frequency band falls outside the existing allocation, then the Authority must approve and amend the frequency licence and conditions of service.

An example would be where a frequency assignment was done in a band where it was allocated to fixed links, a licensee should not be able to merely as a result of the amendment to the frequency assignment be able to use that to then deliver IMT services.

This change in usage that does not fall within the parameter of the allocation per the Band plan must be subject to public debate, where it is in the public interest.

2500 – 2690 MHZ

MTN acknowledges and commend the Authority for the harmonisation of this band, i.e. the allocation on a primary basis for MOBILE with channel arrangements according to ITU-R recommendation M.1036, specifically C1 i.e. IMT2600 MTX (2500

- 2570 MHz), IMT2600 TDD (2570 - 2620 MHz) and IMT2600 BTX (2620 - 2690 MHz).

Frequency Arrangements	Paired arrangements					Un-paired arrangements
	Mobile station transmitter(MHz)	Centre Gap (MHz)	Base station transmitter(MHz)	Duplex separation (MHz)	Centre Gap Usage	
C1	2500 - 2570	50	2620 - 2690	120	TDD	2570 -2620 TDD

3400 – 3600 MHZ

MTN agrees with the allocation for FIXED and MOBILE on a co-primary basis, but it should be noted that at least two vendors have already developed IMT3500 TDD equipment, and that there is at least one network operator that has deployed an LTE TDD network in 3GPP band 42 (UK Broadband).

This corresponds with arrangement F1 in ITU-R M.1036 and could signify the start of a global trend where 3GPP Band 42 is used exclusively to provide MOBILE services using IMT3500 TDD.

57 – 66 GHZ

MTN requests ICASA to consider the inclusion of an allocation for RLAN in the NRFP, see ITU-R M.1450, and IEEE802.11ad. This comment is for advisory purposes as the aforementioned standard has recently been finalised.