

**15 February 2013**

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**Attention:** Mr Manyapelo Richard Makgotlho

**Per email:** [chairperson@icasa.org.za](mailto:chairperson@icasa.org.za)  
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Dear Dr Mncube

**Vodacom's submission in response to the Draft update of the National Radio Frequency Plan**

Please find herewith Vodacom's submission in response to the Draft update of the National Radio Frequency Plan as published by the Authority in Government Gazette No. 36025, Notice No. 1060 of 2012, 21 December 2012.

Vodacom hereby confirms its willingness to participate in any further consultative process which the Authority may schedule in respect of this matter.

Yours sincerely



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Vodacom's written submission in response to the invitation for comments regarding the  
Draft update of the National Radio Frequency Plan 2012

[Notice 1060, Government Gazette 36025 of 21 December 2012]

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## INTRODUCTION

Vodacom (Pty) Ltd ("Vodacom") welcomes the opportunity to comment on the draft update of the National Radio Frequency Plan (NRFP) 2012 as published by ICASA ("the Authority") in Government Gazette No. 36025 of 21 December 2012. Vodacom commends the Authority for the good job in updating the National Radio Frequency Plan. The few changes that are being made to the current plan indicate that the plan is becoming stable. We further confirm our willingness to participate in any further consultative process which the Authority may undertake in this regard.

Our submission is comprised of two parts:

- Part A contains Vodacom's general comments on key proposals of the Draft update of the National Radio Frequency Plan, and
- Part B contains Vodacom's specific comments.

Vodacom's suggested additions are marked with bold and underlining and deletions are marked in ~~bold and strikethrough~~.

## PART A: GENERAL COMMENTS

### Alignment of frequency assignments with the NRFP

Vodacom supports the Authority's determination that all frequency assignments must be in accordance with the current version of the national radio frequency plan. This is very important because it ensures coexistence of the different radiocommunications services in various frequency bands. For example, the Authority's decision to assign frequencies based on the ITU-R Region 2 frequency allocation in the 850 MHz band is creating coexistence problems with the 800 MHz band. In Africa, standard CDMA is limited to 2x11 MHz (824-835 MHz//869-880 MHz) due to E-GSM and will need to be further limited to less than 2x8 MHz assignable spectrum, due to the first Digital Dividend (DD1) (ie.791-821 MHz // 832-862MHz). In South Africa, Neotel's frequency assignment of 2x4.92 MHz (827.775-832.695 MHz//872.775-877.695 MHz) overlaps with the lower band edge of the DD1 upper band (832 MHz).

### Annual revision of the NRFP

Vodacom supports the annual review of the national radio frequency plan and if deemed necessary, the Authority should issue the update of the NRFP to ensure that the plan is current.

## PART B: SPECIFIC COMMENTS

### Paragraph 1.2

The acronym AGA should be replaced by the following:

AGAA            Astronomy Geographic Advantage Act (Act No. 21 of 2007).

### Paragraph 2.1

The fourth sub-paragraph of paragraph 2.1 refers to "SATFA". Vodacom is of the view that "SATFA" should be replaced by "NRFPA" because the South African Table of Frequency allocation was replaced by the National Radio Frequency Plan in 2010.

### Paragraph 2.3.2

The heading for Column 2 on this paragraph should be changed to "South African ~~spectrum usage~~ allocations and footnotes" to align with the heading of Column 2 contained in the Table of Frequency allocations.

### 450-470 MHz

Vodacom supports the identification of this band for IMT, in particular for rural coverage. Furthermore, Vodacom supports the Authority's decision to conduct a feasibility study in order to establish availability of equipment and the amount of spectrum in this band taking into consideration current usage. The feasibility study is essential considering that deploying LTE at 450 MHz will not be as easy as it sounds. LTE is not yet standardised at 450 MHz, although that could take place by the end of 2013<sup>1</sup>. Furthermore, LTE requires at least 10 MHz of spectrum, but the 450 MHz band can only allow up to 8 MHz paired spectrum according to channel plan options contained in ITU-R Recommendation M.1036. Brazil awarded 450 MHz spectrum in June 2012. Brazilian Regulator - Anatel was forced to bundle

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<sup>1</sup> According to the article in Total Telecom, 28 November 2012, China's Huawei, which provides equipment for many CDMA 450 players, is also backing LTE 450. In July 2012 it signed a commitment with the Brazilian government to develop LTE technology for the 450-MHz band. TIM Brasil revealed that it plans to launch LTE services in the 450MHz band in 2015 and is working with the 3GPP on the standardisation of LTE 450.

450 MHz bandwidth with the more lucrative 2.5 GHz spectrum, since it attracted no bidders. According to the CDMA industry body (the CDMA Development Group), there are eight operators worldwide using the 450-MHz band solely for broadband services and a further 108 for voice. This will initially have an impact on device availability and cost due to low economy of scale.

#### 470-790 MHz

Vodacom supports the primary allocation of the 694-790 MHz (700 MHz) frequency band to Mobile services and its identification for IMT services (Section 5 NF9 Note 3). Vodacom's understanding is that although the allocation will be reflected in the NRFP immediately, the band will only be available for use after WRC 15<sup>2</sup>. This is in line with the outcome of WRC 12, which resolved to include the allocation to Mobile services in Region 1 in the Table of Frequency Allocations although the allocation will be effective from 2015. Resolves 4 and 5 of Resolution 232 (WRC 12) require that various studies pertaining to spectrum requirements by mobile and broadcast services, channel arrangements, and the lower band edge for the 694-790 MHz allocation in Region 1 should take place within the ITU-R prior to WRC 15.

At a national level, analogue broadcasting migration to digital broadcasting should take place. Furthermore, the broadcasting re-planning exercise to accommodate all digital broadcasting services below 694 MHz should take place in order to clear the spectrum above 694 MHz of broadcasting services. If the spectrum requirements studies contemplated in Resolution 232 indicate that additional spectrum is required for broadcasting services above 694 MHz, the spectrum will be made available at WRC-15 subject to the consideration of spectrum requirements of Mobile service in this band. Similarly, if additional spectrum is required for Mobile services below 694 MHz, that

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<sup>2</sup> Resolves 2 of Resolution 232, states that the allocation of the band 694-790 MHz to Mobile service on a co-primary basis is effective immediately after WRC 2015 not 2012.

spectrum will be made available at WRC 15 subject to the consideration of spectrum requirements for Broadcasting services.

#### 790-862 MHz and 862- 960 MHz

Vodacom supports the Authority's decision (Section 5 NF9 Note 4(II)) that in South Africa the use of the 800 MHz (i.e. 791-821 MHz // 832-862MHz) band will take precedence over the 850 MHz (824-849 // 869-894 MHz) band, considering that the latter is not aligned with ITU Region 1 frequency allocations. Vodacom is of the view that the 850 MHz channel arrangement should not have been allowed in the first place. Vodacom is pleased that no new assignments will be made according to the 850 MHz channel arrangement. Vodacom does not support the inclusion in the NRFP of the statement that current 850 MHz assignments will move to the 800 MHz band<sup>3</sup>. This statement pre-empts the anticipated licensing process of the 800 MHz band and entitles current users of the 850 MHz band access to the 800 MHz band without following the due process that will be outlined through the Radio Frequency Migration Regulations and the Radio Frequency Spectrum Assignment Plan. Vodacom proposes that to be consistent throughout the NRFP, the following statement should be included instead:

"Migration of current assignments in the 850 MHz will be addressed in accordance with the Radio Frequency Migration Regulations"

#### 2300-2450 MHz

Vodacom supports the identification of the 2300-2400 MHz band for IMT under the existing Mobile service allocation.

#### 2500-2690 MHz

Vodacom supports the Authority's decision to identify the 2500-2690 MHz band for IMT and the subsequent adoption of Option C1 channel arrangement contained in ITU-R

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<sup>3</sup> Note 4 (ii) of National Footnote 9 (NF 9)

Recommendation M.1036<sup>4</sup>. This will ensure that the band is harmonised with channel plans adopted by many Region 1 countries.

### 3400-3600 MHz

Vodacom supports the Authority's decision to identify the 3400-3600 MHz band for IMT and the subsequent adoption of Option F2 channel arrangement contained in ITU-R Recommendation M.1036<sup>5</sup>.

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<sup>4</sup> 2x70 MHz (FDD) and 50 MHz (TDD) channel plan

<sup>5</sup> 2x80 MHz (FDD) channel plan