

**MOBILE TELEPHONE NETWORKS (PTY) LTD**  
Head Office: 216 14th Ave Fairland 2195  
Private Bag 9955 Cresta 2118 South Africa  
Tel +2711 912 3000 Fax +2711 912 4001 <http://www.mtn.co.za>



**18 February 2013**

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

Via Email : [chairperson@icasa.org.za](mailto:chairperson@icasa.org.za)

Attention : Manyapelo Richard Makgotlho  
Via Email : [rmakgotlho@icasa.org.za](mailto:rmakgotlho@icasa.org.za)

Dear Sir,

**RE: NOTICE OF ICASA REGARDING THE 2<sup>ND</sup> DRAFT RADIO FREQUENCY MIGRATION PLAN  
AS PUBLISHED IN GG 36031 DATED 24 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 over a light blue horizontal line.

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

*Directors* PL Heinamann (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 TO ICASA'S 2<sup>ND</sup> DRAFT  
FREQUENCY MIGRATION REGULATION AND THE  
2<sup>ND</sup> FREQUENCY MIGRATION PLAN AS PUBLISHED  
IN GOVERNMENT GAZETTE NO 36031 DATED 24  
DECEMBER 2012**

**18<sup>th</sup> February 2013**

## 1. INTRODUCTION

The Independent Communications Authority of South Africa ("ICASA") on 24<sup>th</sup> December 2012 published a Notice, inviting comments regarding the 2<sup>nd</sup> draft frequency migration regulation and radio frequency migration plan. This follows on from the initial Draft Frequency Migration Regulations and radio frequency migration plan that was released on the 17<sup>th</sup> August 2012, (by way of Notice 606 of 2012).

MTN welcomes the initiative of the Authority in publishing these new drafts of both the frequency migration regulation as well as the migration plan.

MTN is grateful for the opportunity to provide written comments on the aforementioned proposed migration regulations and plan. We believe the approach adopted by the Authority in releasing these draft regulations in conjunction with the updated National Radio Frequency Plan is the correct approach MTN maintains that constructive engagement and consultation is a necessity in order to bring about a framework that would be to the optimum benefit of all South Africans.

MTN supports the principles of the draft radio frequency migration regulations as enunciated on page 6 of the Government Gazette and as such we believe that these 2<sup>nd</sup> draft regulations, once finalised, should provide the required clarity to this undertaking. We further believe that, if applied correctly, the final migration plan could be the springboard that South Africa requires to achieve broadband access for all. Although these draft regulations do take into account certain issues raised from the first round of consultation, MTN notes with concern that some fundamental issues still need to be addressed.

MTN confirms its willingness to participate in any oral hearings which may be scheduled in regard to the draft frequency migration regulation and frequency migration plan.

MTN's submission is comprised firstly of general comments regarding the draft regulation and migration plan, followed by specific comments on the draft migration plan.

## **2. GENERAL COMMENTS**

MTN commends the Authority of a well drafted document. There can be no doubt that ICASA has the rights and responsibility to develop migration regulations and subsequent migration plans.

It is heartening to note that ICASA has taken cognizance of the preliminary decision made during the World Radio Conference-12 to allocate the 700MHz for IMT services for Region 1 (EMEA) and the additional commentary with regards to the Astronomy Geographic Advantage Act

MTN notes that the Authority has agreed to a feasibility study to determine the public, economic and social benefit when identifying the radio frequency spectrum bands that are to be migrated as the migration of users utilizing certain frequency bands is a complex task especially where there are current users who may have made significant investments. MTN reiterates that 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. Consequently, MTN again proposes that when the frequency spectrum assigned to a licensee is to be used by that licensee for a different technology or standard but in circumstances where the allocation as specified within the table of frequency allocations (to indicate the purpose of that frequency band) remains the same, the involvement of the Regulator should be kept to a minimum. By way of example: where a licensee used GSM and wishes to evolve to LTE it should be able to do so without oversight from the Authority as both standards or technologies fall within the allocation of IMT services.

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 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.

MTN notices with concern that the Authority still continues to reference, on several occasions, Government Gazette 34872 which is the Draft invitation to apply for Radio Frequency Spectrum Licence to provide mobile broadband wireless access service for urban and rural areas using the Complimentary Bands, 800 MHz and 2.6 GHz.

MTN reminds the Authority that this particular gazette was withdrawn on the 5 March 2012 until further notice and pending the finalisation of the Minister's policy directions. Referencing the withdrawn notice is indicative that the Regulator has pre-determined the method of assignment for these bands and will not give due consideration to the still to be published Ministerial policy direction. As such MTN recommends that any reference to Government Gazette 34872 be removed from the text as it is non-existent.

### 3. SPECIFIC COMMENTS

#### Ad paragraph 1.2.3 Spectrum re-farming

The Authority explains the concept of spectrum re-farming as follows

*“Generally speaking, re-farming may be seen as process constituting any basic change in conditions of frequency usage in a given part of radio spectrum. Such basic changes might be:*

- 1. Change of technical conditions for frequency assignments;*
- 2. Change of application (particular radiocommunication system using the band);*
- 3. Change of allocation to a different radiocommunication service.”*

In the recommendation of the ITU-R SM.1603-1 (which document is attached hereto), the following definition is proposed:

“Spectrum redeployment (spectrum re-farming) is a combination of administrative, financial and technical measures aimed at removing users or equipment of the existing frequency assignments either completely or partially from a particular frequency band. The frequency band may then be allocated to the same or different service(s). These measures may be implemented in short, medium or long time-scales.”

MTN is in agreement with this recommendation of the ITU and in turn suggests that the Authority adopts such a definition.

In the draft migration plan *“The term re-farming is used to describe:*

- *the process where a GSM operator changes the use of all or part of the spectrum used for GSM to UMTS / LTE; especially where the spectrum licence has specified the technology (as GSM) and the operator licence has to be changed<sup>1</sup> .”*

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<sup>1</sup> Even where the licences are not technologically specific and it could be argued that the change in use from GSM to LTE does not require a regulator to get involved, in order to make efficient use of the spectrum it may be necessary to modify the individual assignments within the band.

MTN believes that only in the instance where a license is technology specific should an operator's licence have to change. However unlike the footnote, MTN reiterates as above that where licences are not technology specific and where the frequency allocation remains as specified within the table of frequency allocations (indicate the purpose of that frequency band), such as the example above, then the involvement of the Regulator should be kept to a minimum as the use of the frequency that licensee still falls within the allocation.

### **Ad Paragraph 3.3.1 Time Frame to migrate existing end users**

*“Potential areas that may arise in the future include:*

- *Conversion of existing cellular frequencies to HSPA/LTE.*
  - *Because of the large number of GSM customers with voice / text only phones and the availability of other bands for mobile broadband, it is unlikely that GSM bands will be shut off any time soon.*

*A switch over from 3G / HSPA to LTE – if this ever occurs would involve a time frame of 3-5 years to accommodate the life cycle of the end-terminal equipment”*

We don't understand the reference that there may be potential concerns or areas in the future that need regulatory intervention. Any evolution of networks will be operator driven as part of the normal operational efficiencies and customer experience and service issues as driven in a competitive market place.

We see no reason why there could be any contemplation by the regulator to specify technology and standard migration. This document deals with frequency migration.

## **Ad Paragraph 4.8 Key issues with respect to migration**

*“Mobile broadband. ‘Mobile’ broadband is an important use of radio frequency spectrum at the current time and there is a large demand for spectrum in several bands for this purpose. As such, mobile broadband is the service that is most likely to require the migration of other services to accommodate its spectrum needs. The allocation of spectrum for mobile broadband / IMT has already been done via WRC resolutions for ITU region 1 as well as per SADC proposed common sub-allocation/ utilization. This ensures that equipment is readily available and a harmonized service can be provided both across the Southern African region as well as other countries in Region 1.”*

MTN is in agreement with statement, however although this document deals with the migration plan, it is imperative that the spectrum for mobile broadband be assigned correctly and expeditiously in order for South Africa to achieve its broadband objectives.

MTN is of the opinion that any increase in internet penetration or internet access will be delivered in the short to medium term by means of wireless and more specifically mobile broadband. Thus, MTN is heartened to observe that within the recently published Draft update of the National Radio Frequency Plan, a significant number of bands have been identified and included for the deployment of MOBILE Services. MTN must mention that any deferment or further delay in the assignment of appropriate frequency bands will be detrimental to the achievement of South Africa’s 2020 vision of 100% broadband access as stated by the President in his State of the Nation address on the 14<sup>th</sup> February 2013.

### **Ad paragraph 4.10.10 380 - 400 MHz**

*‘This band will be allocated as a contiguous block for public protection and disaster relief (PPDR) as well as public safety with users including SAPS, SANDF, the ambulance service, metro police and Fire-fighting services. All other users will migrate out of this band. This allocation would recognize the importance having a band dedicated for public safety and free of any other potential sources of*



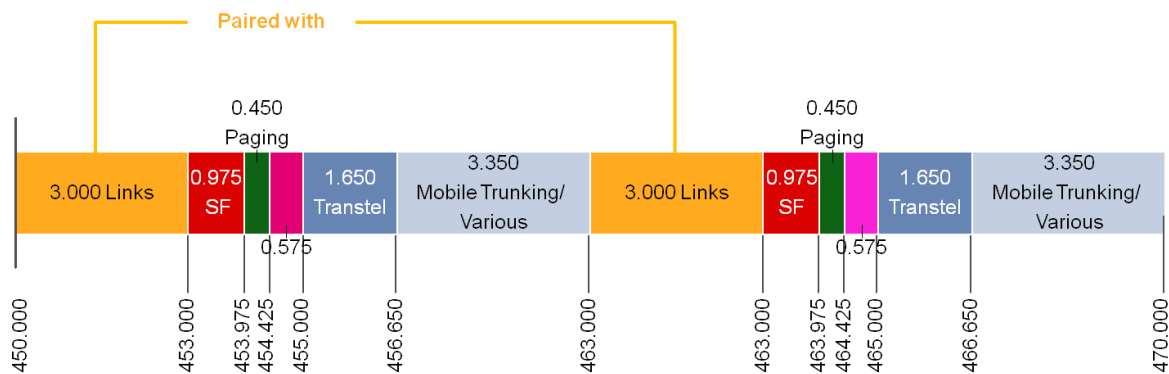
interference. In ideal circumstances, these users would make use of a common digital public trunking network which would also promote interoperability between such users in periods of emergency.

It is also recommended that private establishments who work alongside and are responsible for public safety also operate within this band. This would allow interoperability with other public safety/ emergency services users.

MTN supports in principle the allocation of a dedicated band for the use of public protection and disaster relief and is in agreement with the suggestion that the use of a single PPDR system infrastructure which facilitates communications between different groups involved in public safety be used. Close consultation with the Department of Communications is required for this to be successful.

**Ad paragraph 4.10.13 450 - 470 MHz**

“This band is currently used for Trunked Mobile with several users including the Railways (Transnet) and mines (Figure 1). The SADC FAP proposed common sub-allocation/ utilization seeks to allocate this spectrum for Mobile IMT. This is important to note that several adjacent countries (e.g. Mozambique) are moving to implement this proposal. Although the band has a large number of assignments, a recently concluded spectrum audit indicates that the spectrum usage is quite low – indicating inefficient spectrum use.



**Figure 1 Current assignment 450 – 470 MHz**

*In view of the other spectrum that has been identified for IMT, it is proposed therefore:*

- *To migrate the current users out of this band into the radio frequency 3 GHz and above space*
- *To allocate this band to Mobile (IMT) as per Res. 224 of WRC-07.”*

As mentioned in our previous submission on this matter, MTN strongly supports this proposal as the propagation characteristics of this frequency band are ideally suitable for rural deployment.

The IMT ecosystem for this band is not of a mature nature, to the extent that benefits of scale cannot be realised within the next two to three years. This affords the Authority sufficient time to initiate and complete a feasibility study on the existing usage within this band. Subject to the outcomes of the aforementioned feasibility study, the anticipated migration of existing users should be co-ordinated in such a fashion as to allow industry players to develop a roll-out plan that effectively exploits the propagation characteristic of this particular band.

MTN believes that the spectrum in this band would be efficiently utilised if it is allocated to IMT450 and the existing users migrated to more appropriate frequency spectrum bands. MTN notes that the Authority has proposed such an allocation within the draft updated National Radio Frequency Plan.

**Ad paragraph 4.10.14     470 - 790 MHz**

*‘This band has been assigned for Broadcasting and Mobile on a co-primary basis for Region 1 countries at the WRC-12. Given that there is a current planned migration underway in the 790 – 862 MHz band (due to be completed by 2015), a proposal would be to concurrently define and implement a migration plan for the 694 – 790 MHz band as well. The time-line to complete the migration could be staggered as compared to the 794 – 862 MHz band. This would ensure that no new services are allocated for this band and the existing users have a finite and defined period to migrate.*

*It is proposed that:*

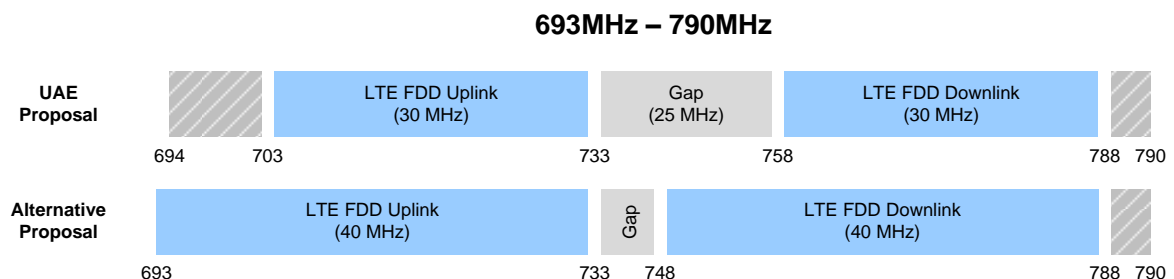
- *The migration plan is aligned with the on-going efforts within the 800 MHz band as defined in Government Gazette 34872<sup>2</sup>.*
- *With respect to the small number of Studio Links in this band; these must be migrated out and given point to point fixed assignments.*

*Self Help Stations must be migrated out into the broadcast bands below 694 MHz.*

MTN strongly supports this proposal as the propagation characteristics of this frequency band are equally suitable for rural deployment and in building penetration.

MTN supports the need for the development of a migration plan for the band 694 - 790 MHz. MTN believes it would be beneficial if the migration of existing uses and users within this band be run in parallel with the migration of existing services in the 1<sup>st</sup> Digital Dividend, instead of a staggered approach. MTN further proposes that 2015 should be set as the deadline for the completion of the migrations for both Digital Dividend bands.

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). Depicted below are two possible proposals that MTN believes are most suitable for South Africa.



<sup>2</sup> Government Gazette 34872: Draft invitation to apply for Radio Frequency Spectrum Licence to provide mobile broadband wireless access service for urban and rural areas using the Complimentary Bands, 800 MHz and 2.6 GHz

MTN proposes that the Authority and the DoC considers the above proposals.

**Ad paragraph 4.10.15      790 - 862 MHz**

*‘This band has been allocated for IMT (Terrestrial) for Region 1 countries at WRC-07 and is often termed as Digital Dividend 1. Currently this band is occupied by UHF TV. Migration is planned to be completed by 2015.*

*It is proposed that:*

- *The migration plan is aligned with the on-going efforts within the 800 MHz band as defined in Government Gazette 34872<sup>3</sup>.*
- *With respect to the small number of Studio Links in this band; these must be migrated out and given point to point fixed assignments.*
- *Self Help stations must be migrated out into the broadcast bands below 692 MHz.”*

MTN reiterates its support for this proposal but maintains that there should be and cannot be any reference to Government Gazette 34872: Draft invitation to apply for Radio Frequency Spectrum Licence , as this notice has been withdrawn.

MTN highlights that any deferment or further delay in the migration of services within this band will be detrimental to the achievement of South Africa’s 2020 vision of 100% broadband access as stated by the President in his State of the Nation address on the 14<sup>th</sup> February 2013.

**Ad paragraph 4.10.16      862 - 890 MHz**

As a precursor to our comments on the paragraphs that follow. A harmonization of the 900MHz band would need to consider the ITU’s 862 - 890 MHz, 890 - 942 MHz & 942 - 960 MHz blocks as Cell C, VC & MTN spectrum encompasses 880MHz – 915MHz (uplink) and 925MHz – 960MHz (downlink).

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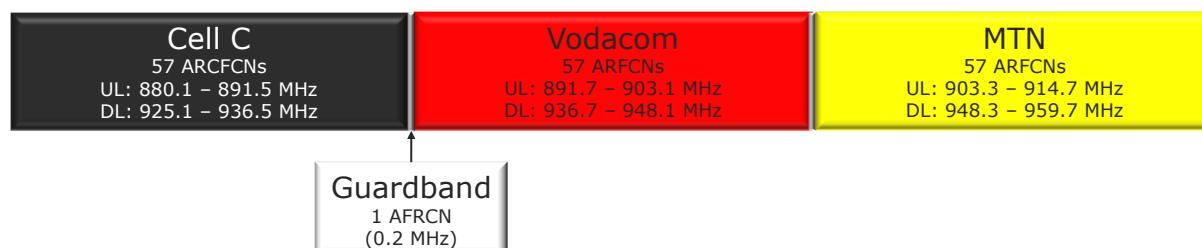
<sup>3</sup> Government Gazette 34872: Draft invitation to apply for Radio Frequency Spectrum Licence to provide mobile broadband wireless access service for urban and rural areas using the Complimentary Bands, 800 MHz and 2.6 GHz

**Ad paragraph 4.10.17 890 - 942 MHz**

MTN welcomes and supports the outcomes of the 1<sup>st</sup> consultation that no migrations are necessary at this stage. However, as stated above, a harmonization of the 900MHz band would need to consider the ITU's 862 - 890 MHz, 890 - 942 MHz & 942 - 960 MHz blocks as Cell C, VC & MTN spectrum encompasses 880MHz – 915MHz (uplink) and 925MHz – 960MHz (downlink).

**Ad paragraph 4.10.17 942 - 960 MHz**

MTN is not adverse to the proposed 900MHz Band harmonization given that there can potentially be improved spectrum efficiency in the form of two additional GSM channels (ARFCNs) for the three operators currently using this spectrum; so long as the harmonized allocation is as follows:



Additionally, as Vodacom do currently, both Cell C and MTN would eventually be able to benefit from 2 x 5 MHz U900 carriers once the UMTS Capable Customer Mobile Handset Landscape changes to be more UMTS dominated.

However what is a major concern to MTN is the complexity of the process required to achieve the proposed harmonization, as well as the associated man hour cost and the cost of cell extender re-tuning/replacement that would be required in order to achieve such a migration without significant impact to MTN's customers.

MTN has in excess of 4500 affected cell extenders of which an estimated 70% would need to be re-tuned on site, and the remaining 30% would need to be replaced or retuned in factory. Despite the associated cost, in many instances gaining access to

customer's premises in order to achieve such cell extender re-tuning/replacement is a challenge in itself (and the impact (nuisance, logistics) of which is our biggest concern). There is also the issue of:

- Many Illegal cell extenders in MTN's network and other operator networks, the re-tune impact of which is unknown.
- The location of all cell extenders not being known (Cell extenders could have moved with the subscriber).

MTN believes the following process would need to be followed in order to best achieve the migration without significant customer impact (refer to attached presentation for details):

- Cell C would need to re-plan their GSM 900 network to vacate the current spectrum block sandwiched between MTN's spectrum i.e. UL:904.3–905.7MHz, DL:949.3–950.7MHz.
- Cell C re-tunes/replaces Cell Extenders they have deployed so as not to repeat the signal in the vacated spectrum block.
- MTN verifies that the vacated spectrum is "clean"; most likely requiring extensive drive testing with a scanner
- Cell-by-Cell: MTN then re-tunes/replaces all Cell Extenders deployed within the GSM cell's coverage area to the new harmonised spectrum, and adjusts the cell's channel allocation to migrate the cell to the new harmonised spectrum allocation.

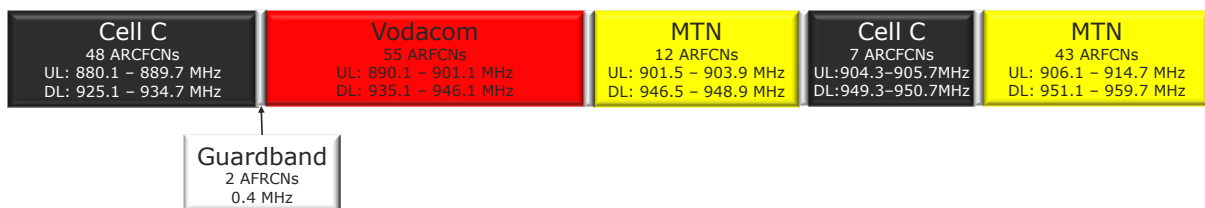
This approach will require one customer CE visit per site but will still suffer from a network quality degradation during the transition phase, impacted by re-tuning not being simultaneous (Band needs to be changed first then the cell extenders need to be re-tuned. In the interim subscribers will be impacted by degraded network quality (direct (Subscriber where CE is installed) and surrounding area). The Authority would need to accept and take cognisance of relating to the Quality of Service requirements it has placed on mobile operators, if not the migration action of the Authority would lead to a degradation over which the operator concerned has no control.

This equates to an estimated monetary cost of between 15 and 20 million rand (MTN's part) to achieve the migration.

In addition to the above-mentioned impact on existing cell-extenders, more than 100 shared IBS (in-building systems) systems would need to be re-programmed.

### 900 Band Harmonization- Immediate Benefit proposal

As a more immediate solution, MTN proposes a reduction in the 0.4MHz guard band to a 0.2MHz guard band between each operators 900MHz allocations. This is an acceptable separation for the current network technology. As can be seen below, this will “free” up four (4) 0.2 khz channels to be used by operators towards improvement in operator spectrum efficiency and quality. Operators would however have to use these frequencies within the realms of Operator Cell Extender limitations.



## **900 Band Harmonization- Way forward**

- It is suggested that a feasibility study/ impact analysis is required by ICASA in order to ascertain the best possible approach to achieve such harmonization of the 900 band with minimal customer impact in such a way that the benefits outweigh the cost and, where reasonable, these costs are allocated to appropriate parties.
- Through this process, a clearer understanding of the complexities would emerge and result in more definitive time frames.
- Additionally there is a need to consider network GSM to UMTS Traffic migration strategies and forecasts in determining whether the need for migration is of an urgent nature. MTN maintains there is no urgency for this migration, and that the immediate solution is more viable at this stage.

*ICASA, in their decision, should consider/ acknowledge the following facts:*

- 1. The current Radio Technology allows Operators to use a spectrum span of up to 30MHz so the current band allocation is fully usable for GSM (>80% of SA's voice traffic).*
- 2. It is however unclear if Illegal wireless Phones and security devices interfere in this spectrum.*
- 3. Cell Extenders have a limited output power so every frequency received that is amplified reduces the CE coverage area. As such all operators minimize the band covered at all times.*
- 4. UMTS900 device penetration for operators is low. The reason for this is the cost of the device itself and hence high barrier to entry. Servicing GSM900/1800 devices will remain dominant in South Africa for the next 3-5 years to come.*



#### **Ad paragraph 4.10.28      2300 - 2450 MHz**

*The band is currently in use for several services including:*

- *Fixed links – 2307 – 2387 MHz paired with 2401 – 2481 MHz.*
- *Outside broadcasting links (28 MHz) – primary basis at (2377, 2471 MHz), secondary basis at (2321, 2349 MHz, 2415, 2443 MHz).*
- *ISM – 2400 – 2483.5 MHz.*

*As per SADC FAP proposed common sub-allocation/ utilization, it is proposed to:*

- *Allocate 2300 – 2400 MHz for IMT (Terrestrial).*
- *Continue to retain allocation of 2400 – 2483.5 MHz for ISM.*
- *Existing Fixed links could be migrated above 3 GHz.*
- *Migrate outside-broadcasting links in line with the DTT migration (potentially to 1518 – 1559 MHz band).*

MTN supports the allocation of the frequency spectrum band to IMT2300 TDD as this is in line with ITU-R M.1036.

MTN's understanding of the assignment of radio frequency spectrum is in line with what the Authority has outlined above, that is to say assignments were made for fixed links. We are also under the impression that Telkom is assigned 2 x 34MHz Duplex within this band and that no spare capacity is available within this band. We are therefore left slightly perplexed by how 8ta, a division of Telkom can claim they have 60MHz of spectrum within this band, which they intend to utilise for the deployment of TDD-LTE.

It is MTN's opinion that a change in application such as what is being implemented by Telkom is beyond the scope of the initial allocation of that frequency band and would require that firstly the allocation be amended. This is currently proposed in the draft update of the National Radio Frequency Plan (GG 36025). It is only once the allocation has been amended that any frequency assignments could follow. However, we believe that this frequency band would be seen as a high demand frequency band and would then only be capable of assignment once the Ministerial

policy directive process has been finalised and then subject to Part IV Procedures for Radio Frequency Spectrum Licensing and Assignment, specifically section 7 Procedure in respect of 31(3), of the Radio Frequency Spectrum Regulations as published in the Government gazette 34172 on the 31<sup>st</sup> March 2011.

Section 31(3) of the ECA states *“The Authority may, taking into account the objects of the Act, prescribe procedures and criteria for awarding radio frequency spectrum licences for competing applications or instances where there is insufficient spectrum available to accommodate demand.”*

We are therefore unable to fathom how a FDD assignment to the fixed line incumbent for fixed (microwave) services has been converted for TDD use in the absence of a public process and seemingly without Regulatory approval.

It is quite possible that Telkom has sought regulatory approval from the Authority and that this has not been communicated to the market. In which case, existing mobile operators are left at a severe disadvantage as they are unable to deploy a commercial LTE network on a ubiquitous level as mobile operators have been unable to obtain high demand spectrum within the digital dividend and 2.6GHz bands.

If such approval was sought and obtained then MTN is of the opinion that there has been a disregard of the objects of the Act more specifically Section 2(g) which is to *“promote an environment of open, fair and non-discriminatory access to broadcasting services, electronic communication networks and electronic communication services.”*

The Authority is requested to divulge any details that it may have relating to the change of use of this particular frequency band by Telkom.

**Ad paragraph 4.10.29      2500 - 2690 MHz**

*‘This band is being used by Sentech (65 MHz) and WBS (15 MHz); 125 MHz is currently available for assignment. As per SADC FAP proposed common sub-allocation/ utilization this band has been allocated for Mobile IMT.*

*It is proposed to:*

- *Align re-planning efforts within the 2.6 MHz band as defined in Government Gazette 34872<sup>4</sup>.*
- *Allocate the band to Mobile IMT.”*

MTN would suggest that an audit be done to evaluate the level of utilisation within this band. If it is found to be under-utilised then migrate the existing licencees out of this band and assign via an ITA process.

MTN highlights that within PART 1 of these draft documents, namely Draft Frequency Migration Regulations, Section 4 Process for Radio Frequency Migration

*“The Authority shall initiate a process of radio frequency migration in the following circumstances:*

- (d) Where the Authority has determined that a change in use of the frequency is necessary for efficient utilisation of the radio frequency spectrum and to otherwise meet the objectives of the Act.*
- (e) Where the Authority has determined that a change in a radio frequency spectrum licence holder’s assignment within a radio frequency band is required to enable more efficient use of the radio frequency spectrum (in-band migration).”*

As a large portion of the radio frequency spectrum licensed in this band has been lying fallow for a lengthy period, it would be appropriate that this spectrum be returned to the Authority for reassignment.

MTN acknowledges and commend the Authority for the harmonisation of this band, i.e. 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).

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<sup>4</sup> Government Gazette 34872: Draft invitation to apply for Radio Frequency Spectrum Licence to provide mobile broadband wireless access service for urban and rural areas using the Complimentary Bands, 800 MHz and 2.6 GHz

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

Furthermore, MTN reiterates that there should be no reference to Government Gazette 34872: Draft invitation to apply for Radio Frequency Spectrum Licence, as this notice has been withdrawn and clearly does not exist any longer.

#### **Ad paragraph 4.10.30 3400 - 3600 MHz**

*“This band is currently being utilized by:*

- *Sentech (national).*
- *Neotel (national).*
- *Telkom (national).*
- *USAL (regional).*

*In terms of WRC 07 decisions and as per SADC FAP proposed common sub-allocation/ utilization it is proposed to:*

- *Allocate for mobile service on a primary basis and use for Mobile IMT. This would also result in a harmonized Mobile IMT band across the entire SADC region.*
- *Migrate existing users out of the band.*

MTN supports this proposal. This band is allocated to FIXED and MOBILE services on a co-primary basis, MTN welcomes the Authority’s proposal to migrate existing users out of the band and allocate the band for MOBILE IMT service. The Authority proposes channel arrangement F2 (ITU-R M.1036) for South Africa, which is supported by MTN.

TABLE 7

Frequency arrangements	Paired arrangements				Un-paired 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

### Ad paragraph 4.10.38 40000 MHz and above

*“Although out-migration is not an issue above 40GHz, the following comment should be made:*

- *Frequency bands above 40 GHz are relatively under-utilized. Equipment is available off the shelf for high bandwidth PTP links over distances of up to 5km. It is proposed that in the spectrum above 40GHz, allocations are made for Fixed Services such as PTP links – which would be useful especially in metropolitan areas for line-of-sight (LoS) high capacity data links.”*

MTN supports this proposal as well as being in agreement of MIMOTECH request of re-evaluation of spectrum fees in these higher bands.

MTN suggests that the Authority evaluates the inclusion of an allocation for RLAN for the bands 57 -66GHz, see ITU-R M.1450, and IEEE802.11ad.