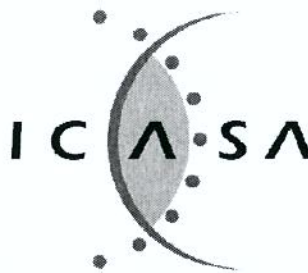


Government Gazette

GENERAL NOTICE

NOTICE 730 OF 2014

INDEPENDENT COMMUNICATIONS AUTHORITY OF SOUTH AFRICA



PURSUANT TO SECTION 4 (1) OF THE ELECTRONIC COMMUNICATIONS ACT
2005, (ACT NO. 36 OF 2005)

**HEREBY ISSUES A NOTICE REGARDING THE DRAFT IMT ROAD MAP FOR
CONSULTATION – INVITATION FOR COMMENT DOCUMENT.**

1. The Independent Communications Authority of South Africa ("the Authority"), hereby publishes **the Invitation for Comments document on the Draft IMT (International Mobile Telecommunication) Roadmap for Consultation** in terms of section 2 and 4, read with sections 30, 31(4), and 33 of the Electronic Communications Act (Act No. 36 of 2005).
2. Interested persons are hereby invited to submit a hard copy as well as an electronic version of their representation on the Draft IMT Roadmap by no later than 16h00 on Tuesday, 7 October 2014.
3. When compiling their representation in terms of (2) above, respondents are required to respond to the questions using the attached template which can be obtained on the ICASA website: www.icasa.org.za.

4. Written representations or enquiries may be directed to:

The Independent Communications Authority of South Africa

Pinmill Farm Block A

164 Katherine Street

South Africa

Private Bag XI0002

Sandton

2146

Attention:

Mr Manyapelo Richard Makgotlho

e-mail: rmakgotlho@icasa.org.za

5. All written representations submitted to the Authority pursuant to this notice shall be made available for inspection by interested persons from 8th of October 2014 at the ICASA Library or website and copies of such representations and documents will be obtainable on payment of a fee.

Where persons making representations require that their representation or part thereof be treated as confidential, then an application in terms of section 4D of the ICASA Act, 2000 (Act No. 13 of 2000) must be lodged with the Authority. Such an application must be submitted simultaneously with the representation on the draft IMT roadmap. Respondents are requested to ensure that any confidential material is marked clearly as confidential or placed in an annexure which is titled confidential. Kindly note that should the request for confidentiality be refused, the person making the request will be allowed to withdraw the representation or document in question.

Dr SS MNCUBE
CHAIRPERSON



Invitation to Comment
on the
Draft IMT Roadmap

August 2014

1 Cover Sheet

Title

MR

Given Name(s)

Subhash

Surname

JAGANNATH

Representing (self /organisation)

ORGANISATION

Name of organisation (if applicable)

ETHEKWINI ELECTRICITY

Contact telephone number

031 311 9561

Contact email address

JAGANNATHS@ELEC.DURBAN.GOV.ZA

1.1 Confidentiality

See page 2 above.

1.2 Declaration

I confirm that the information supplied on the cover sheet may be incorporated into a formal consultation response: it can be published by ICASA, unless otherwise specified on this cover sheet, and I authorise ICASA to make use of the information in this response to meet its legal requirements.

Signed at DURBAN

Date 2014-10-03

2 Invitation to Comment

The Authority invites written comment from relevant stakeholders on the draft IMT Roadmap and Feasibility studies for IMT in 450-470 MHz and 880-960 MHz.

2.1 IMT450

2.1.1 The Authority invites industry views on IMT usage in general in 450-470MHz.

Ethekwini Electricity requires radio frequency spectrum to establish private wireless communication networks to support smart grid applications.

This band will be suitable for utility smart metering (electric, water etc) and can be used for communications between data concentrators and smart meters. It is expected that one concentrator could service approximately 50 - 1000 meters. Connections are not expected to be continuous but rather in scheduled intervals (TDD).

Ethekwini Electricity supports the alignment to IMT450.

2.1.2 The Authority invites industry views on IMT paired spectrum usage for PPDR.

Ethekwini electricity supports the option 2 of the feasibility study for IMT450 and PPDR should be reallocated onto another IMT band.

2.1.3 The Authority invites industry views on IMT paired spectrum usage for the SA connect initiative.

No comment.

2.1.4 The Authority invites industry views on IMT unpaired spectrum usage for M2M and smart energy/grid applications in South Africa.

Ethekwini Electricity supports the deployment of Time Division Duplexing (TDD) in the IMT 450 band.

It is advantageous for future smart grid applications such as uplink-oriented communications between smart meters and data concentrators and SCADA visibility to electrical infrastructure to reduce power outage durations. This is typically a low power, low bandwidth application that requires good coverage to reduce deployment costs.

2.1.5 The Authority invites industry views on the migration of incumbents (Transnet, SAA, Telkom, etc.) out of the 450-470MHz band.

Ethekwini Electricity supports migration of existing users of the 450-470 MHz band. This band should be reallocated for potential smartgrid and public safety applications.

2.1.6 The Authority invites industry views on the migration time line.

Ethekwini Electricity would like to commence small scale private wireless network deployments in the short term and requests strict adherence to the proposed timelines.

2.1.7 The Authority invites industry views on destination bands.

Ethekwini Electricity supports the Authority's view on destination bands.

2.1.8 The Authority invites industry to give any other inputs that must be taken into consideration when finalising plans for the IMT 450 band

No comment.

2.2 IMT700

2.2.1 The Authority invites industry views on Option 1 (ITU Region 3).

Ethekwini Electricity requires radio frequency spectrum to establish private wireless communication networks to support smart grid applications.

The IMT700 band will be suitable for communications between data concentrators and backhaul communications infrastructure.

The cost of deployment of solutions for this option will be influenced by the complexity of the terminals and equipment and is expected to be higher than for the other regions. Economy of scale may come into play.

2.2.2 The Authority invites industry views on Option 2 (ITU Region 1).

Ethekwini Electricity supports the adoption of Option 2 with the implementation of an unpaired TDD band in 738-753 MHz which will aid in uplink performance.

2.2.3 The Authority invites industry views on Option 3 (ITU Region 1).

Ethekwini Electricity prefers the flexibility of Option 2 over the increased paired spectrum in Option 3.

2.2.4 The Authority invites industry views on 2×3 MHz IMT band of ITU Region 1 solution.

No comment.

2.2.5 The Authority invites industry views on other ITU Region 1 based suggestions.

No comment.

2.3 IMT750

2.3.1 The Authority invites industry views on IMT unpaired spectrum in the coverage band of 750MHz.

Ethekwini Electricity supports the use of IMT750 TDD particularly for M2M applications.

2.4 IMT800

2.4.1 The Authority invites industry views on Option 1 (ITU Region 3).

No comment

2.4.2 The Authority invites industry views on the 2×3 MHz IMT band of Option 1 (ITU Region 3).

No comment.

2.4.3 The Authority invites industry views on Option 2 and 3 (ITU Region 1)

Ethekwini Electricity supports the adoption of Option 2

2.5 IMT850

2.5.1 The Authority invites industry views on the migration of incumbents (Neotel, etc.) out of the band.

No comment.

2.6 GSM900 spectrum consolidation

2.6.1 The Authority invites industry views on spectrum consolidation.

No comment.

2.6.2 The Authority invites industry views on guard bands.

No comment.

2.6.3 The Authority invites industry views on the time line of spectrum consolidation, i.e. when it should be done.

No comment.

2.6.4 The Authority invites industry views on demand for IMT migration of 5MHz taking into consideration the spectrum for IMT available in the 700 and 800 MHz bands.

No comment.

2.6.5 The Authority invites industry views on need-based differentiated spectrum assignments in the 880-915 MHz (paired with 935-960 MHz).

No comment.

2.6.6 The Authority invites industry views on demand for IMT migration of 10MHz, taking into consideration the new spectrum for IMT in 700MHz and 800MHz.

No comment.

2.7 IMT2300 unpaired spectrum TDD

2.7.1 The Authority invites industry views on usage of 2380-2400MHz.

Ethekwini Electricity supports the use of TDD in this band. This band will be suitable for high capacity long-haul communications between remote sites and backbone communications infrastructure.

2.7.2 The Authority invites industry views on usage of 2290-2300MHz for IMT.

No comment.

2.8 IMT2600 paired FDD spectrum

2.8.1 The Authority invites industry views on demand in the IMT2600 FDD band.

Ethekwini Electricity supports the use of this band. This band will be suitable for high capacity long-haul communications between remote sites and backbone communications infrastructure.

2.8.2 The Authority invites industry views on the migration of the incumbent (WBS), into 2380-2400MHz.

Ethekwini Electricity supports the migration of WBS into the 2380 -2400 MHz band. The advantages of additional capacity and lower operational expenditure will outweigh the initial cost of migration for both the service provider and its clients.

2.8.3 The Authority invites industry views in-band migration of the incumbent (WBS), into IMT2600 unpaired spectrum.

Even though this will be the a easier and more cost effective solution in the short term, Ethekwini Electricity does not support the in-band migration of WBS to TDD in the IMT2600 band as WBS will consume 50% of available spectrum.

2.8.4 The Authority invites industry views on alternative destination bands for the incumbent (WBS).

No comment.

2.9 IMT2600 unpaired TDD spectrum

2.9.1 The Authority invites industry views on demand in IMT2600 TDD band.

50MHz of spectrum in IMT2600 should be sufficient for backhaul of M2M traffic.

2.10 IMT3500 unpaired TDD spectrum

2.10.1 The Authority invites industry views on migration out of 3400-3600 MHz from FDD usage to TDD.

No comment.

2.10.2 The Authority invites industry views on status and time line.

No comment.

2.10.3 The Authority invites industry views on interest in TDDdownlinkfocused spectrum.

Ethekwini Electricity supports the use of TDD downlink focused spectrum in the higher frequency IMT bands.

2.10.4 The Authority invites industry views on interest in TDDuplinkfocused spectrum.

Ethekwini Electricity supports the use of TDD uplink focused spectrum in the lower frequency IMT bands.

2.10.5 The Authority invites industry views on interest in the introduction of a Managed Spectrum Park.

No comment.

2.11 Operators opinion on one TDD-operator instead of every operator having parts of TDD spectrum

2.11.1 The Authority invites industry views on the TDD spectrum bundling of IMT450, IMT750 and IMT2600 and assignment to one (wholesale) operator.

Ethekwini Electricity does not support the wholesale assignment of the IMT bands. Individual assignment and management of networks is necessary for the deployment of mission critical services.

2.11.2 The Authority invites industry views on the operator interest in individual IMT3500 assignments per operator or in one assignment to one (wholesale) operator.

Ethekwini Electricity does not support the wholesale assignment of the IMT bands. Individual assignment and management of networks is necessary for the deployment of mission critical services

2.12 Universal service obligations for lower frequency bands (sub-1GHz)

2.12.1 The Authority invites industry views on universal service obligations for lower frequency bands (sub-1GHz).

A second category ought to be defined under universal service obligations for sub-1 GHz bands for communication services for mission critical government operations. Such services include the management of water and electric utilities and transportation systems.

It is imperative that the above needs are identified and catered for to ensure the smooth operation of this country. The economic and social impacts are far reaching..

2.13 Capacity licence obligations for new and existing IMT bands

2.13.1 The Authority invites industry views on licence obligations for new and existing IMT bands, including infrastructure sharing.

Mission critical government operations require access to communication networks offering quality of service functionality to meet high network performance requirements. This is achievable with private wireless communication networks on condition that dedicated radio frequency spectrums are allocated.

The current situation is that mission critical government operations are increasingly finding themselves dependent on 3rd party mobile networks for communication solutions. In general government sectors do not have the CAPEX or OPEX to such deploy networks as it does not form part of their core business. The service offered by the mobile operators is best effort and is negatively impacting service delivery.

At present LTE technology used by operators offer quality of service (QoS) functionality, but this is either not implemented or offered by the operator to government services. As a result utilities are left with a best effort service which is not reliable enough to operate mission critical networks forcing them to consider investing in private infrastructure .

To drive modernization and service delivery improvement, government represented by ICASA should consider allocating frequency spectrum for LTE Networks to the mobile network operators on condition that QoS functionality is implemented and offered to government services at regulated rate. This relationship will be mutually beneficial to all stakeholders including the citizens of South Africa. This solution will enable the relevant stakeholders to focus on their core business functions.

2.14 Additional input

2.14.1 The Authority requests any other inputs that are deemed necessary and appropriate which should be taken into consideration.

Ethekwini Electricity requires dedicated spectrum for deployment of their Smart Grid technologies. Spectrum in various bands is required to connect thousands of smart meters and electrical network elements to the utilities core fibre infrastructure.

Ethekwini Electricity have taken a multitier approach in providing communications to its electrical infrastructure. Wireless communications is projected to be the most effective solution for the lower tiers. Spectrum is needed below 1 GHz to cover longer distances and to reduce deployment costs to reach outlying areas. Spectrum above 1 GHz is required for applications that require more bandwidth in dense deployments.

The use of private wireless networks over public networks for mission critical services is preferred as the utility can fully control the network in terms of availability, security and coverage. Hence dedicated spectrum for Smart Grid applications is necessary.

Ethekwini Electricity has identified spectrum that will be suitable for its deployment of Smart Grid applications and various technologies such as CDMA, WiMAX, ZigBee, WiFi Mesh and LTE are currently available for deployment.

Spectrum allocation is required by Ethekwini Electricity in the following bands:

- IMT450: 2x5 MHz channels for smart metering (electric, water etc). This band will be suitable for use between data concentrators and smart meters.
- IMT 700/750/800: 2x10 MHz channels for communications infrastructure. This band will be suitable for communications between data concentrators and backhaul communications infrastructure.
- 1400 MHz: 2x20 MHz channels for communications infrastructure. This band will be suitable for communications between data concentrators, electrical network elements and backbone communications infrastructure.
- 3.6-3.8 GHz: 2x20 MHz Utility channels for communications infrastructure. This band will be suitable for high capacity long-haul communications between remote sites and backbone communications infrastructure.