
GENERAL NOTICE

NOTICE 1530 OF 2006



INDEPENDENT COMMUNICATIONS AUTHORITY OF SOUTH AFRICA

**PURSUANT TO SECTION 31 (3) OF THE ELECTRONIC COMMUNICATIONS
ACT, 2005 ("THE ACT")**

**HEREBY ISSUES A NOTICE INVITING COMMENTS REGARDING THE
PROCEDURES AND CRITERIA FOR AWARDING RADIO FREQUENCY
SPECTRUM LICENCES FOR COMPETING APPLICATIONS OR INSTANCES
WHERE THERE IS INSUFFICIENT SPECTRUM AVAILABLE TO
ACCOMMODATE DEMAND.**

1. The Independent Communications Authority of South Africa (“the Authority”) hereby issues a notice soliciting comments from interested parties regarding the prescription of procedures and criteria for the awarding of radio frequency spectrum licences for competing applications or instances where there is insufficient spectrum available to accommodate demand as stipulated in section 31 (3) of the Act.
2. Interested parties wishing to submit written comments for the Authority’s considerations are requested to submit such comments by no later than 16h00 on the 30th November 2006.
3. In the event that the Authority convenes public hearings, interested parties are requested to indicate whether or they wish to be afforded the opportunity to make oral submissions the Authority. The estimated duration of such oral submission ought to be indicated, though may not be in excess of one hour.
4. Written representations may be posted or hand delivered for the attention of:

Mr. Mandla Mchunu
Manager: Spectrum Management,
Pinmill Farm: Block A
164 Katherine Street
Sandton
2146

Private Bag X10002
Sandton
2146 South Africa

Tel: +27 11-321-8323
Fax: +27 11-321-8538
Email: mmchunu@icasa.org.za;
5. All written submissions made to the Authority pursuant to this notice shall be availed for inspection to all interested parties at a date to be determined by the Authority. Furthermore, the written submission shall be availed at the Authority’s Library and copies of such written submission may be obtained upon payment of a fee.
6. Pursuant to section 4D of the Independent Communications Authority of South Africa Act Amendment Act No. 3 of 2006 (“the ICASA Amendment Act”), a person submitting information to the Authority may request that specific information be treated as confidential information. Within 14 days

of receiving a request for confidentiality, the Authority must make a determination whether or not confidentiality will be granted and provide the applicant for such confidentiality written reasons for such a determination. In the event that the Authority determines that a request for confidentiality cannot be acceded to, the party providing the information will be given an opportunity to withdraw the information which is the subject of the confidentiality request. Information which is determined by the Authority as confidential will not be availed for inspection by other interested parties.

7. With regards to information which has been determined by the Authority as confidential pursuant to section 4D of the ICASA Amendment Act, throughout the course of any public hearing convened, the Authority may direct that any person (**s**) shall not be present during the oral submission of such information. Persons who are present at such public hearings shall have been notified by the Authority beforehand and be afforded an opportunity to object to such a directions by the Authority.
8. In guiding the essence of the process at hand, the Authority has compiled questions which are particularly pertinent and requests that interested parties consider these questions within the scope of their written, and as the case may be oral submissions. These questions are detailed in an annexure entitled "**DISCUSSIONDOCUMENT**"
9. The findings, recommendations and conclusions by the Authority following public comment will be published in the Government Gazette pursuant to Section 4C (6) of the ICASA Amendment Act.

DISCUSSION DOCUMENT

1. Backaround

The Independent Communications Authority of South Africa ("the Authority") derives its regulatory mandate from the Electronic Communications Act of 2005 ("the ECA") and the ICASA Amendment Act of 2006 ("the ICASA Amendment Act").

Section 30 of the Electronic Communications Act states that:

- (1) *"In carrying out its functions under this Act and the related legislation, the Authority controls, plans, administers and manages the use and licensing of the radio frequency spectrum except for in section 34.*
- (2) *In controlling, planning, administering, managing and licensing the use of the radio frequency spectrum, the Authority must-*
 - (a) *comply with the applicable standards and requirements of the ITU and its Radio Regulations, as agreed to or adopted by the Republic;*
 - (b) *take into account modes of transmission and efficient utilisation of the radio frequency spectrum, including allowing shared use of radio frequency spectrum when interference can be eliminated or reduced to acceptable levels as determined by the Authority;*
 - (c) *give high priority to applications for radio frequency spectrum where the applicant proposes to utilise digital electronic communication facilities for the provision of broadcasting services, and other services licensed in terms of this Act or provided in terms of licence exemption;*
 - (d) *plan for the conversion of analogue uses of the radio frequency spectrum to digital, including the migration to digital broadcasting in the Authority's preparation and modification of the radio frequency spectrum plan; and*
 - (e) *give due regard to the radio frequency spectrum allocated to security services*
- (3) *The Authority must, in performing its functions in terms of subsection (1), ensure that in the use of the radio frequency spectrum harmful interference to authorised or licensed users of the radio frequency spectrum is eliminated or reduced to the extent reasonably possible.*
- (4) *The Authority must investigate and resolve all instances of harmful interference to licensed services that are reported to it."*

Section 31 (1) to (4) provides as follows:

- (1) *“Subject to subsections (5) and (6), no person may transmit any signal by radio or use radio apparatus to receive any signal by radio except under and in accordance with a radio frequency spectrum licence granted by the Authority to such a person in terms of this Act.*
- (2) *A radio frequency spectrum licence is required in addition to any service licence contemplated in Chapter 3, where the provision of such service entails the use of radio frequency spectrum.*
- (3) *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 to accommodate demand.*
- (4) *The Authority may amend a radio frequency spectrum licence-*
 - (a) to implement a change in the radio frequency plan;*
 - (b) in the interest of orderly radio frequency spectrum management*
 - (c) to effect the migration of licensees in accordance with a revised radio frequency plan or the transition from analogue to digital broadcasting;*
 - (d) if requested by the licensee concerned to the extent that the request is fair and does not prejudice other licensees; or*
 - (e) with the agreement of the licensee.”*

It is readily discernable that section 31(3) of the Act compels the Authority to prescribe a methodology for the assignment of radio frequency spectrum licences in instances where there exists competing applicants for access to the identical frequency spectrum and instances where there is spectrum insufficiency relative to the demand for such spectrum.

2. Introduction

Spectrum is a finite natural resource that has become very important and most difficult to manage. Spectrum Managers all over the world have been tasked with the challenge of ensuring that spectrum is used efficiently as the demand continues to grow.

Spectrum has been managed for some time now in South Africa. The general approach world wide has been for the spectrum manager to decide on the use of spectrum and allocate or assign the spectrum for particular use. This approach however has been challenged by the high number of incumbents attempting to get access to the spectrum.

In the recent years, technological advancement continued to put a further strain on the availability of spectrum. The demand for mobile use of telecommunications services has led to the demand for spectrum that has never been experienced before. Regulators in particular have been faced with the challenge of ensuring that spectrum is used efficiently and economically.

As demand continued to exceed supply in some of the frequency bands, the approach in spectrum management has become problematic. Some regulators have gone for the "beauty-contest", while others have opted for auctions. The challenge with both approaches lies with how effective would they be in terms of ensuring that spectrum once assigned or allocated to a user, the user will use it in an efficient and economically manner.

The Authority faced with the task of ensuring that spectrum is used efficiently and economically, is evaluating the best practice possible to ensure that there is efficient use of the spectrum.

3. **STRATEGIC PLANNING OF THE USAGE OF SPECTRUM**

The Authority agrees that the use of the spectrum should be planned strategically. Spectrum planning is, of course, necessary for technical reasons, including the avoidance or minimisation of interference. Moreover, the spectrum is too valuable a resource for its use to be determined in a haphazard and uncoordinated way and it is essential for businesses and other major users to have as much certainty as possible about future arrangements for their own forward planning.

To produce a comprehensive spectrum strategy involves the need to reconcile the interests of the many different categories of spectrum user, and to balance commercial and other public policy objectives. Spectrum users include major commercial users such as public telephone networks, privately provided business systems, radio and television broadcasting, maritime and aeronautical; many large scale non-commercial users such as defence, science (for example radio astronomy) and public services, such as the police, fire and ambulance services, users of short range devices, and, finally, other non-commercial individual users such as amateur radio. Because of the need to balance these many different needs and interests, the strategic planning of the spectrum is inevitably a complex matter.

Spectrum planning involves making sometimes difficult choices between competing users, including both current and potential future users. It is unlikely that all the large and growing range of radio users will always be satisfied with the decisions taken.

It is obviously desirable that the allocation of spectrum should be conducted in as transparent a way as possible in order to provide industry and other users with the maximum of information about planned allocations (and about why certain decisions were taken), and to enable them to plan their own business strategies.

The radio spectrum is a limited resource and the demands on it are constantly increasing. Accommodating as many as possible of these demands and, where necessary, choosing between them, is at the heart of spectrum management. The spectrum manager has to balance a wide range of technical, economic and social considerations.

Market and technical developments in communications are proceeding at an unprecedented rate. The phenomenon of convergence of digital information technology, broadcasting and telecommunications, is one of the main manifestations of this trend. It is impossible to predict what the outcome will be.

Spectrum is an essential raw material for the radio-based industries that are making a large, and rapidly increasing, contribution to economies and competitiveness throughout the world. Future success and growth will increasingly depend on the effective management of the radio spectrum resource and, in particular on the ability of spectrum management authorities to make spectrum available speedily for innovation and growth. At a time of rapid change, regulation by itself is not sufficiently agile or flexible to achieve optimal use of the finite spectrum resource.

The other challenge that the Authority is faced with is the issue concerning the policy objectives that the licensees have to achieve as part of their license conditions. However it does not necessarily follow that they should be given preferential access to spectrum. It should also be recognised that in circumstances when statutory duties present a challenge on allocating a particular band, this may require some other means of ensuring that the process does not translate to not meeting the legislative requirements to an entity.

4. RADIO SPECTRUM LICENSING

The Authority is further faced with the fact that there is spectrum that is more in demand than others and therefore the approach that needs to be followed in allocating or assigning spectrum has to take this into account.

It also remains a challenge on the part of spectrum managers to identify the expected demand of a particular band of the spectrum, as more and more services continue to be introduced at some specific bands and thereby competing for the same available bandwidth. As services become introduced, it becomes increasingly difficult to predict with certainty whether a particular band will meet the expected demand or not. The Authority therefore has to develop a mechanism that will best suit the country in terms of licensing of spectrum.

The Authority has identified two bands where demand exceeds the available bandwidth. Those are:

1. 3400 – 3600MHz (3.5GHz)

2. 2500 – 2690MHz (2.6GHz)

4.1 The 3.5GHz band.**4.1.1 Current situation.**

This band has been subdivided in terms of ITU-R F1488. The duplex spacing is 100MHz and three operators are currently licenced in the band as follows:

- Telkom 2x28MHz
- Neotel 2x28MHz
- Sentech 2x14 MHz

The above assignments leave a total of 60MHz available for further assignments.

4.1.2 The way forward.

Considering the amount of radio frequency spectrum, available, the Authority is of the view that it is unable to assign such frequency spectrum in an equitable manner so as to adequately cater for the relatively high demand. We therefore seek an advice from the industry on the best possible way of licensing the remaining spectrum. Over and above the general comments the Authority seek answers to the following questions.

QUESTIONS ON 3.5GHz BAND (SECTION A)**Question A1**

How should the remaining spectrum be subdivided?

Question A2

Should the Authority consider National or Regional allocation of (geographical restricted) licences or a combination of both?

Question A3

How many licences ought to be issued within the available spectrum?

Question A4

Which method or criteria should the Authority use in considering applications for the awarding of radio frequency spectrum licences for competing applications?

Question **A5**

Which method or criteria should the Authority use in considering **applications** for the awarding of radio frequency spectrum licences where there is insufficient spectrum available to accommodate demand?

Question A6

Which other policy imperatives ought to guide the Authority in determining the procedures and criteria contemplated in section 31(3) of the Act specifically relating to the consideration of applications for the awarding of radio frequency spectrum licences for competing applications?

Question A7

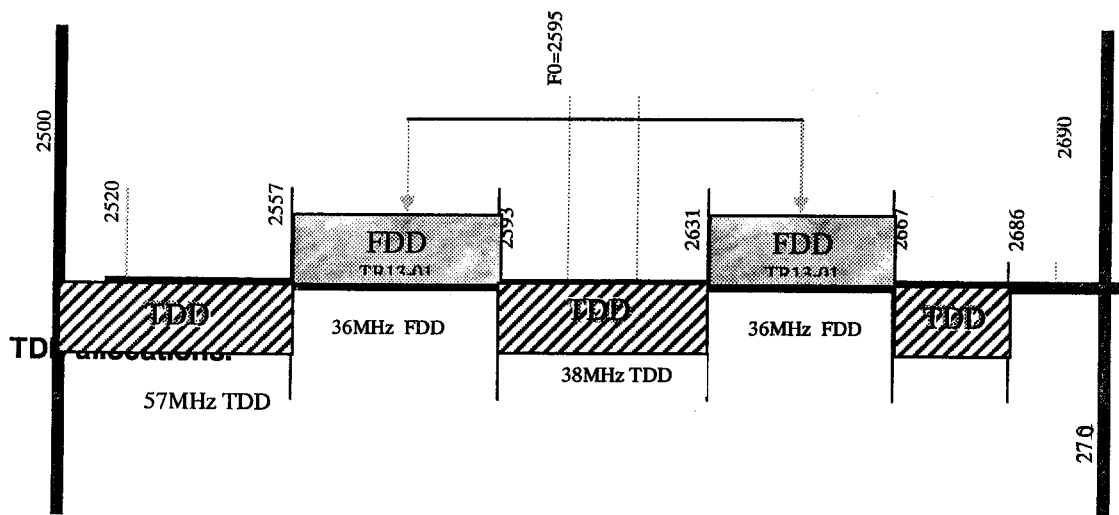
Which other policy imperatives ought to guide the Authority in determining the procedures and criteria contemplated in section 31(3) of the Act specifically relating to the consideration of applications for the awarding of radio frequency spectrum licences where there is insufficient spectrum available to accommodate demand?

In the event that interested parties consider that there are other pertinent issues not canvassed throughout the Discussion Document pertaining the process contemplated in section 31(3), the Authority invites such interested parties to submit their respective views.

4.2 The 2.6GHz band.

4.2.1 Current Situation.

This band is currently segmented to cater for Time Division Duplex (TDD) and Frequency Division Duplex (FDD) systems. The FDD systems will be point to point links according to CEPT Recommendation T/R 13-01.



Sentech has an assignment of **50MHz** in the band and WBS has **14MHz**. This leaves a total of **126MHz** spectrum available for further assignments. There are a number of tests currently conducted by different entities under temporary licences.

4.2.2 Way Forward.

The Authority intends allocating the whole band for TDD. The FDD parts of the band will be converted to TDD. This will make **126MHz** of spectrum available. With regards to such a process, the Authority solicits comments to the following questions:

QUESTIONS ON 2.6GHz (SECTION B)**Question B1**

How should the remaining spectrum be subdivided?

Question B2

Should the Authority consider National or Regional allocation of (geographical restricted) licences or a combination of both?

Question B3

How many licences ought to be issued within the available spectrum?

Question B4

Which method or criteria should the Authority use in considering applications for the awarding of radio frequency spectrum licences for competing applications?

Question B5

Which method or criteria should the Authority use in considering applications for the awarding of radio frequency spectrum licences where there is insufficient spectrum available to accommodate demand?

Question 66

Which other **policy** imperatives ought to guide the Authority in determining the procedures and criteria contemplated in section **31(3)** of the Act specifically relating to the consideration of applications for the awarding of radio frequency spectrum licences for competing applications?

Question 67

Which other **policy** imperatives ought to guide the Authority in determining the procedures and criteria contemplated in section **31(3)** of the Act specifically relating to the consideration of applications for the awarding of radio frequency spectrum licences where there is insufficient spectrum available to accommodate demand?

In the event that interested parties consider that there are other pertinent issues not canvassed throughout the Discussion Document pertaining the process contemplated in section **31(3)**, the Authority invites such interested parties to submit their respective views.
