

ISOC-ZA Response to ICASA Frequency Spectrum Questions

General notice 1530 of 2006

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Would you like to make an oral representation (Yes or No): Yes

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1. **Introduction**

ISOC-ZA welcomes the opportunity to make a submission to ICASA on the frequency band allocation.

The ISOC-ZA is a civil society organisation that enables telecommunications users in South Africa to participate in public debate around policy and regulatory issues pertaining to the new economy. Our goal is to represent the interests of telecommunications users and consumers, particularly individuals, small businesses and academic institutions. During the past years the Internet Society has made submissions on a number of regulatory and legislative proposals, as well as providing an ongoing email-based discussion forum open to all interested parties (see www.isoc.org.za for further details).

2. **Responses to questions on the 3.5GHz Band**

2.1 Question A1

How should the remaining spectrum be subdivided?

Response

The question is leading in that it only refers to the "remaining spectrum". There is therefore an explicit assumption that the status quo in respect of the incumbents must perpetuate. Given that there may be commitments made to the incumbents, which do not make it practical to allocate the entire considered spectrum range in a fair and equitable manner, it then becomes crucial that the Authority ensures the current allocation does not result in spectrum squatting.

This is particularly so in that the current allocations are national allocations. A usage map of the current allocations is bound to show large areas in which the spectrum is not being used. This means that there are therefore potential regional and local operators who could use such spectrum, but this would mean that the Authority would have to prescribe to the incumbents on the re-allocation of their spectrum in under or unused regions.

The "remaining" spectrum of 60MHz could be divided as follows:

- 4 x 15MHz (= 2 operators)
- 6 x 10MHz (=3 operators)

Alternatively another model that was proposed by our members was as follows:

- 2 x 14MHz = exclusively reserved for Under Serviced Area Licences (USAL)
- 2 x 14 MHz further divided into 2 x 7MHz for remaining contenders.

Based on the model of regional allocation we are proposing, any of these methods could be used. In the first suggestion the 15MHz allocation allows for more subscribers per operator and the 10MHz allocation allows for more operators. In the alternative suggestion a lesser amount is available for the operators in the form of an auction while at the same time reserving a certain percentage for USALs. While this may result in some "spectrum-squatting" by the USALs it may also allow the USALs to auction a part of the spectrum to allow them to cross-subsidise in order to meet their licence requirements.

2.2 Question A2

Should the Authority consider National or Regional allocation of licenses or a combination of both?

Response

We are of the opinion that the Authority should only consider regional allocation for the remaining spectrum. Based on the allocations above, regional allocation gives:

Potential number of operators = [Number of regional operators] x [number of regions]

So for a uniform 15MHz allocation to all regional licenses (assume 25 regions), we have:

Potential number of operators = 2 x 25 = 50 operators

Obviously the real number will be lower because some operators will apply for multiple regions. The method of allocating the spectrum according to regions also has the added advantage of not preventing a major player from acquiring a nationwide spectrum in the form of multiple regional licences – if this were to be appropriate.

The point being made is that regional allocation is the best way of ensuring increased competition from a large number of operators. Having more operators raises the level of complexity, but the level of innovation, competition and telecoms penetration is raised considerably. Splitting the allocation into the 10MHz or 7Mhz channels adds even more potential operators.

2.3 Question A3

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

Response

Based on the regional allocation proposed, we suggest allocation of three 10 MHz licenses i.e. that 3 licenses be allocated per region. Alternatively 4 x 7MHz regions could be allocated with the remaining spectrum being allocated to USALs. Irrespective of the system used, we believe that one of those licenses should be allocated to municipalities.

2.4 Question A4

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

Response

Applications in this context can be construed in two ways:

- (a) the technology and media that it carries e.g. WiMax carrying data, voice or multimedia; or
- (b) the type of application of the service e.g. private networks, public access networks, metropolitan area networks.

The convergence of technologies and applications - as understood in the Electronic Communications Act - means that it would be virtually impossible - and certainly impractical - to consider applications such as whether the spectrum will carry multimedia - to be defining criteria for awarding spectrum licenses.

It therefore remains that the key criteria for awarding the spectrum should be what it is used for. The following are suggested as some of the criteria in awarding spectrum:

Social Considerations

1. How does such an award increase the level of competition, and hence drive down pricing, in the region it is allocated?
2. Does the allocation of the frequency increase the levels of monopoly in the telecoms sector or promote competition?
3. Will the allocation of spectrum decrease the digital divide?
4. Is the allocation of spectrum to the applicant likely to result in increased local economic development in the applicable region?
5. How will the allocation of spectrum result in new business development, investment and skills development?

Technical Considerations

1. Amount of the spectrum that is required to provide the envisaged service.
2. Required level of signal strength needed for reliable data transfer.
3. Interference that is caused by spectrum allocations that are not sufficiently spaced between regions.
4. The progressive nature of the technology proposed by the applicant.

While ISOC-ZA would be open to the allocation of the spectrum using a specific set of defined criteria where the ultimate award was provided in a transparent fashion, it is not opposed to the auction method of allocating the spectrum provided that care is taken to ensure that the price of the spectrum is not the only factor considered when setting up an auction process. At least spectrum underutilisation and existing spectrum licences should be factored into the auction process to prevent the incumbents from creating a monopoly in wireless communication. In this regard it may be advisable to award the USAL spectrum in terms of an administrative

process, while using an auction system for the remaining part of the spectrum which is not set aside for USAL.

2.5 Question A5

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

Response

1. Please refer to question A4.

2.6 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 licenses for competing applications?

Response

1. Broad-based black economic empowerment;
2. The development of small and medium businesses;
3. The technical likelihood that the spectrum will be optimally utilised;
4. The capacity of the applicant to be able to utilise the spectrum optimally.
5. The time-frame within the plan proposed by the applicant for the optimal utilisation of the frequency.

2.7 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 licenses where there is insufficient spectrum available to accommodate demand?

Response

ISOC-ZA believes that each business should be required to submit a business plan which indicates the way in which the spectrum will be utilised in each region in order to optimise the use of the spectrum in that region. If, according to the time frame provided in the plan, the applicant has not

obtained the objectives within the time provided for, ICASA should re-allocate the spectrum to the competition bidder. This process would apply both to USAL spectrum holders and to other spectrum holders, although the criteria used may be different. The principle of "use it or lose it" should - as a general rule - apply.

3. **Answers to questions on the 2.6GHz Band**

3.1 Question B1

How should the remaining spectrum be subdivided?

Response

The answer to question A1 is also applicable here.

The "remaining" spectrum of 126MHz could be divided as follows:

- 4 x 28MHz (= 4 operators with a remainder of 14MHz for 1 operator)
- 9 x 14MHz (=9 operators)
- 18 X 7 MHz (= 18 operators)

Based on the model of regional allocation we are proposing, any of these methods could be used. The 28MHz allocation allows for more subscribers per operator and the 14MHz allocation allows for more operators, while the 7MHz option provides the lightest touch option and is probably the most conducive to increased competition while also remaining technically feasible.

3.2 Question B2

Should the Authority consider National or Regional allocation of licenses or a combination of both?

Response

We are of the opinion that the Authority should only consider regional allocation for the remaining spectrum. Based on the allocations above, regional allocation gives:

Potential number of operators = [Number of regional operators] x [number of regions]

So for a uniform 14MHz allocation to all regions (assume 25 regions), we have:

Potential number of operators = $9 \times 25 = 225$ operators

Obviously the real number will be lower because some operators will apply for multiple regions. The method of allocating the spectrum according to regions also has the added advantage of not preventing a major player from acquiring a nationwide spectrum in the form of multiple regional licences – if this were to be appropriate.

Splitting the allocation into 28MHz channels could make more sense in the 3.6mhz spectrum as the potential number of operators is 100, and the band allocated is large enough to allow the regional operators to be sustainable.

3.3 Question B3

How many licenses ought to be issues within the available spectrum?

Response

Based on the regional allocation proposed, we suggest allocation of 4 28MHz regional licenses i.e. that 4 licenses be allocated per region.

The remaining 14MHz can be allocated to a National license. We further believe that one of the regional licenses should be set aside for regional municipalities.

Alternatively the spectrum can be divided into far smaller segments of 7MHz which would allow at 18 operators per region. In practice it is likely that this will allow more operators to have some spectrum coverage in most regions.

3.4 Question B4

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

Responses

Please see the answer to question A4.

3.5 Question B5

Please see the answer to question A5.

3.6 Question B6

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 licenses for competing applications?

Response

Please see the answer to question A6.

3.7 Question B7

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 licenses where there is insufficient spectrum available to accommodate demand?

Response

Please see the answer to question A7.

4. **Conclusion**

While ISOC-ZA supports the allocation of the frequency spectrums on a regional basis, this does not necessarily mean that an applicant would not be awarded multiple regional licences which would, in effect, amount to a national licence.

Unlike in many other areas of telecommunications ISOC-ZA recognises the need for a legislative framework in the area of frequency allocation but would caution that the main objective of this allocation should be an increase in competition as this is seen as a method to drive down prices and motivate applicants to provide better and innovative services.

ISOC-ZA thanks ICASA for its consideration of this submission.