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Submission to ICASA re: Licence Fees Proposal

Telemedia's contribution:

Telemedia has previously sent comments and suggestions to ICASA regarding the format and billing of Licence Fees. These comments were sent to Barbara Paxinos, and may be repeated in this document for completeness.

Introduction

The main issue surrounding the proposed Licence fees is the simple act of enforcing them, regulating and checking that the correct Licence applies to the correct Licensee's operations. With the current proposal that will be very difficult, and open to enormous interpretation. ICASA has also made the Licence conversion process extremely difficult, since there is no easy way to compare the old licence to the new one.

N.B. "5. Exceptions: (3) Unless the Authority determines otherwise, broadcasting services are not subject to the radio frequency spectrum fees" – **clarification/further explanation needed!**

Also, Discussion Document pg 24: 7.6.6 Broadcast... However, the users of broadcast services will not be subject to this regulation until the Authority decides otherwise." It is to be understood that all of Telemedia's Microwave and Satellite links, which are all services ancillary to audio and video Broadcasting Services, DO NOT need to be licensed.

Spectrum Licence and/or Station Licence?

Nowhere in the Discussion Document is there any reference to whether the Licence fee will apply to a Radio Link (terrestrial or satellite) as a Station or the Spectrum it uses. **Further explanation needed!**

Electronic Communications Network Service (ECNS) Licenses

According to the Table on page 46 of the Draft Regulation:

"5. Electronic Communications Network Services", there is no sub-section for Broadcasters and/or Broadcasting Service Providers. Further explanation and clarification needs to be given to section "5.8 Electronic Communications Network" - especially "Point to Area Formula using maximum ASTER factor value". Who needs to apply for an ECNS Licence? Are Broadcasters and Broadcasting Service Providers exempt from such a Licence? If so on what basis will the Universal Services Fund levies be made?

Spectrum Pricing

In the Discussion Document, ICASA mentioned in the Introduction, that its current pricing is comparably lower than in other countries. Telemedia disagrees: It operates a permanent satellite earth station in the UK. Ofcom (the United Kingdom Telecommunications Regulator) charges a Licence fee of GBP 545 per year. $545 \times 13.5 = R7357.50$, compared with R50000 charged by ICASA. If the Authority's fees are found to be too high, users will migrate to a country where the Licensing Regime is more user friendly. Another example is Telemedia's SNG Uplink License in Botswana. Their Regulatory Authority charges P2000 per year. $2000 \times 1.25 = R2500$. ICASA proposes to use Administrative Incentive Pricing (AIP) to:

⇒ *Promote efficient use of spectrum:* encouraging users to choose the most cost effective spectrum location is not always possible

- ⇒ *Prevent stockpiling of spectrum*: all things being equal, the users who stockpile spectrum tend to be wealthy, and can easily afford to pay the high licence fees for holding on to the spectrum
- ⇒ *Provide incentives to move to less congested spectrum*: not always possible due to equipment and pricing limitations. It is not possible for Portable/Mobile Links to move to higher frequencies due to various propagation factors. What happens when the Band Re-Plan exercise happens again in five years time?
- ⇒ *Provide incentives to hand back spectrum that is not needed*: typically the users that are holding on to unused spectrum are usually not concerned with the respective licence fee(s) attached
- ⇒ *Encourage users to switch to spectrally efficient technologies*: not always possible due to equipment and pricing limitations. Link Budgets would need to be compiled, to see if the proposed Link would actually work. Since these calculations are purely theoretical, they would not be conclusive, and might not actually work. The Licensee would then suffer from a sub-standard Link, thereby losing revenue. What would the actual cost of Migration to the user be?

Discussion on proposed Formulae

Working through the Discussion Document, it was found that the proposed calculations are impractical, cumbersome and over-complicated. It can be seen that ICASA is trying to regulate the entire frequency spectrum as fairly as possible. But it can also be proven to be counter-productive, and very costly to certain operators.

1. Parameters:

a. Bandwidth (BW)

Linear approach: licence fee proportional to bandwidth used → agreeable, provided the unit price is reasonable, otherwise this parameter will have the opposite effect: users will limit their bandwidth for fear of paying too much in licence fees. Channel bandwidth allocated versus bandwidth utilised requires clarification.

b. Frequency factor (FREQ)

Table of Frequencies and a Factor given to each corresponding range → agreeable, but highly subjective. Higher frequency equipment may prevent certain users from using the high frequency bands – trade-off between Licence Fee and Equipment price. Rain fade is prevalent at frequencies above 10 GHz, even for short distance links, and may not be acceptable.

c. Geographical factor (GEO)

Table of GEO Factor values, based on population density → not agreeable, since the Licence will then become bound to a particular area in South Africa. What about mobile links? What about ad-hoc links? Eg: On Monday a point-to-point link is used four 2 hours in the Johannesburg CBD, then on Tuesday the same link is used in Thohoyandou, for 8 hours.

d. Congestion factor (CG)

Indicates the existence of a waiting list, while “not congested” identifies cases where demand is less than supply → agreeable, provided a List of “Congested” frequencies is published and very clearly defined. Would the Authority notify the public of Spectrum that has a waiting list?

e. Degree of sharing (SHR)

Sharing discount of 50% is proposed, where shared usage is possible – spectrum is used efficiently as a direct result of not having to assign different frequencies to different licensees, and/or effectively sharing one frequency among a group → agreeable, but only applicable to certain type of radio systems. Why only 50% rebate if 20 or 30 users are sharing, as in the case of satellite uplinks. The sharing factor could be several orders of magnitude.

f. Area sterilized (ASTER) – **point-to-area links**

Prospective licensee submits their system description including the location of their radio base station as well as transmit power figures – table of proposed areas with an associated ASTER factor, determined by the Authority → agreeable, but highly subjective, and only applicable to point-to-area transmission systems.

g. Minimum Hop Length (HOPMINI) – **point-to-point links**

The length of a fixed link and the bandwidth used are indicative of the constraints it poses on other links in the area. The minimum hop length is introduced to encourage licensees to use higher frequencies for short links → not agreeable, what about ad-hoc links, or mobile links? Users will just declare that their links are always further than the minimum for the frequency band, to avoid paying a higher licence fee. How did the Authority decide on the path lengths? ICASA is dictating what equipment users will need, by forcing them to use higher frequencies.

h. Single link factor (UNIBI)

For specific purposes of one-way communications, a licensee might wish to request a unidirectional link. For fixed links, such an assignment makes the other leg difficult to use, because most fixed links are bi-directional → not agreeable, but favourable to Telemédia since all of its Microwave links are unidirectional. But why only a factor of 0.75 for point-to-point links?

2. Formulae (as applicable to Telemédia's operations):

a. Fixed point-to-point Link:

$$FEE = R2000 \times \text{FREQ} \times \text{BW} \times \text{CG} \times \text{GEO} \times \text{SHR} \times \text{HOPMINI} \times \text{UNIBI}$$

$$\text{Eg 1: } 2000 \times 0.4 \times 10 \times 1 \times 1 \times 1 \times 1 \times 0.75 \text{ (4.5 GHz Digital MW Links > 16km)} \\ = R6000 \text{ [Current Fee = R7700]}$$

$$\text{Eg 2: } 2000 \times 0.2 \times 28 \times 1 \times 1 \times 1 \times 1 \times 0.75 \text{ (14 GHz Analogue MW Link > 9km)} \\ = R8400 \text{ [Current Fee = R21560]}$$

b. Satellite Hub Ground Station:

$$FEE = \text{Max} (R50000 ; R2000 * \text{BW})$$

For SNG links = R50000 – no change in pricing, since all use less than 25 MHz Bandwidth

For one Fixed Ground Station = R72000 (for 36 MHz) [Current Fee = R77720]

Other fixed Ground stations = R50000 – no change in pricing, since all use less than 25 MHz Bandwidth

For argument's sake, below is an example calculation for one of Sentech's VHF Transmissions (Eg; SABC1):

174 MHz, 6MHz BW, not congested, high density, exclusive use, 50km omni-directional

Point-to-area Formula = $R2000 \times \text{FREQ} \times \text{BW} \times \text{CG} \times \text{GEO} \times \text{SHR} \times \text{ASTER} \times \text{UNIBI}$

$$= 2000 \times 0.75 \times 6 \times 1 \times 1 \times 1 \times 56 \times 0.5$$

$$= R252000 \text{ [Current Fee = } 6 \times 770 = R4620]$$

Multi-year licenses

Being able to get a licence for several years in advance would save time and money for both ICASA and the licensees → not agreeable, for the following reasons:

1. The ability to secure the licence for several years is not really an incentive since it has been proven historically that the Authority makes Frequency Spectrum and Band Plan changes within the 10 years of the licence, thereby negating the validity of the Licence.
2. discounts available: over three years a saving of 8.6%, five years a saving of 16.6%, and over ten years a saving of 32.4% - these saving are not enough of an incentive, since financially users will save more money by depositing the funds into interest-bearing Bank accounts, and save more than 33% compounded over 10 years (for example). The discount would need to be greater than 50% to be financially sensible.

Unit Price

The Authority proposes that the Unit price for all services (subject to the formulae) be set at R2000 for the current period. How was this figure chosen? By “simplifying” this unit price, is the Authority not over-generalising on the entire frequency band?

Telemedia’s Proposal

1. Telemedia agrees with the Unit amount of R2000
2. The Standard Uplink licence fee should be broken up into mobile (SNG) and fixed Earth Station (VSAT & DTH Uplink etc...). This would be fairer to all users, since SNG uplink dishes are only used occasionally, while fixed VSAT Hub & DTH uplinks are permanently transmitting. Telemedia recommends a lower amount for intermittent usage (such as SNG) and a higher amount for fixed uplink stations.
3. Telemedia agrees with the VSAT Hub and VSAT Non-Hub calculations
4. Point-to-point Links: Some of the proposed parameters don’t apply to Telemedia (or other users such as SABC-Airtime), since they operate many mobile and ad-hoc Microwave Links:
 - a. Simplify the point-to-point formula, (and resulting Administration) by removing the HOPMINI factor
 - b. The Single link factor (UNIBI) for point-to-point links should be 0.5 and not 0.75
5. Review the multi-year Licence fee discount, to be more financially feasible, and guarantee the Licence for the entire duration, with no changes made by the Authority
6. Telemedia requests clarification of whether these proposed Fees will be applicable to a licensee’s Spectrum Licence and/or Station Licence. It seems that all of these proposed Fee changes will only apply to the Spectrum Licence, and that a Station Licence becomes unnecessary.

Conclusions

For these proposed new Licence fees to be effective, the existing Licences need to be accurately and fairly converted. Frequency spectrum users are at great risk of ICASA’s billing procedures. Therefore, an Impact Study needs to be done, with the goal of accessing the impact of the new Licence Fees. A “Value Chain” needs to be defined for Spectrum users, so that there is no “double billing”, and users are billed fairly for the service they provide. Otherwise the Authority will severely hurt the Telecommunications and Broadcasting industries. The final schedule of radio frequency spectrum fees must leave no room for interpretation or ambiguity, otherwise users will be billed too much (or too little) and the Licence Fees will be open to widespread manipulation.

Despite the comments herein, it would appear that Telemedia’s current Licence fees will actually decrease from R287010 to R254400 per year. But this does not mean that Telemedia believes these complicated formulae are an ideal solution to Licensing spectrum charges.