

## **SUBMISSION ON THE ICASA DISCUSSION PAPER FOR THE REGULATORY FRAMEWORK FOR BROADCASTING TRANSMISSION SERVICES**

### **1. SUBMISSION AND RESPONSES TO THE QUESTIONS**

This submission is made in response to Notice 346 of 2011 published by ICASA in Government Gazette No. 34371 on 15 June 2011 that seeks the views of interested stakeholders. The views expressed in this submission are those of Neël Smuts Pr. Eng; B.Sc.B.Eng; FSAIEE in his personal capacity and without any relationship to any other party or anyone with vested interests. His knowledge and experience in these issues was gained during employment at the SABC and later at Sentech in the period from 1964 until 2000. He served as a councillor at ICASA from mid-2000 until mid-2002 and has since then been providing consulting services to various parties on regulatory and technical matters, in particular to the SKA Project that is still on-going at this stage. His involvement and experience at the SABC and Sentech can be summarised as follows:

- 1.1 Construction and operation of sound broadcasting transmitting stations and sound studios in South Africa and Namibia (then South-West Africa).
- 1.2 Revision of the planning for South Africa in the ITU 1963 Africa Plan for frequency assignments in the VHF and UHF television broadcasting bands.
- 1.3 Planning for the introduction of television broadcasting in South Africa, the transmission standard selection (PAL-I) and in the design and establishment of the SABC television broadcasting centre for phase 1 for the first channel.
- 1.4 Management of infrastructure development for transmitters and studios at the SABC which included the on-going expansion of transmitter coverage and programme production facilities, establishment of the terrestrial transmitter network for the introduction and expansion of the second and third television channels and M-Net, introducing added-value transmitting features (RDS, FM-stereo & Nicam-TV sound) and the establishment of satellite distribution and direct-to-home satellite broadcasting.
- 1.5 Management executive for technology operations and expansion at the SABC.
- 1.6 Establishment of Sentech as a going concern, it's licensing as a common carrier for broadcasting signal distribution, conclusion of service agreements with broadcasters and its separation from the SABC.
- 1.7 On-going broadcasting signal distribution operations and infrastructure expansion, including the establishment of the e.tv signal distribution network, and the replacement of obsolete transmitting equipment and support facilities.

Responses to the questions in the Discussion Document are provided in the items that follow. Inevitably some of the responses include background on how the different aspects of broadcast transmission services work and how they were developed. It is hoped that this information will be useful to ICASA and will help to create a regulatory arrangement that will be effective and sustainable in the long term.

## 2. QUESTIONS FOR STAKEHOLDERS FROM CHAPTER 3

### 2.1. Question 1

*Do you agree with the Authority's characterisation of the Broadcasting Market in South Africa? Please provide any additional information that can be used by the Authority in order to understand in more detail the structure of the market.*

The view is expressed that the Broadcast Transmission Services Market in South Africa as described in Chapter 3 of the Discussion Paper is not sufficiently clear or accurate or representative of actual conditions. This could lead to erroneous conclusions and the creation of a regulatory regime that may not be effective in the long term. The following information is meant to assist in providing a better characterisation and understanding of the broadcasting market in terms of the various transmissions involved that is the subject of the Discussion Paper.

#### 2.1.1 Definition and differentiation of Broadcast Transmission Services

Broadcast Transmission Services is a broad concept that should be broken down into its basic parts and defined individually as the different parts have quite different characters and implications.

- (a) Broadcasting signal distribution is the process of delivering the final assembled service or channel content to the listener or the viewer. The definition for this process as it was defined in the Broadcasting Act of 1999, is:

*Broadcasting signal distribution means the process whereby the output signal of a broadcasting service is taken from the point of origin, being the point where such signal is made available in its final content format, from where it is conveyed to any broadcast target area by means of a telecommunication (electronic communication) process and includes multi-channel distribution.*

In this process the programme content must remain unaltered and must be delivered with the minimum quality degradation or transmission breaks. Of course, large national networks may go into regional breaks for periods of time and then the principle of signal distribution applies to each of the sub-networks. The handover of the responsibility for the integrity and quality of the service/channel from final assembly/presentation process to the signal distribution process takes place at the output of the final assembly point. The signal distribution process is described in more detail in 2.1.2 below.

- (b) Another part of Broadcast Transmission Services involves various transmission activities during the broadcasting programme production or acquisition process before the final service or channel assembly takes place and is generally considered to be a part of the programme production process or contribution process, including live transmissions. Some of these transmissions are also referred to as backhaul. Other methods not involving transmission may also be used to obtain broadcast material. More detail is provided in 2.1.3 below.

- (c) Another broadcast transmission service not referred to in the Discussion Paper is the distribution of programme material or packaged programmes from one broadcaster to another or during a special event to many other broadcasters. The latter occurs more often on an international basis for international sport or other major events. More detail is provided in 2.1.4 below.

### **2.1.2 The description of the activities involved in broadcasting signal distribution**

The character of the activities involved in broadcasting signal distribution is described in the following sub items. The descriptions are meant to illustrate how broadcasting signal distribution works and do not represent or reflect the multitude of supportive activities involved.

- (a) Broadcasting signal distribution is a point-to-multi-point unidirectional broadband transmission process that has been functioning in this manner since its inception. In recent times this technique has also been adopted in IP-based electronic communication systems and is referred to as streaming.
- (b) The transmissions for broadcasting signal distribution are intended for reception by the public on a free-to-air or a subscription or pay-as-you-go basis from the time that the complete service or channel leaves the presentation centre. If a broadcasting channel is uplinked to a satellite in a foreign country for direct-to-home transmission and reception by the public, then the signal distribution process starts at the point where the final and complete content of the programme channel is created.
- (c) In the case of analogue single channel broadcasting services, each channel would have its own distribution channels to the allocated transmitters although common routes or facilities could be used. In the case of digital multichannel transmissions, encoding to the MPEG2 or MPEG4 compression standard needs to be done, if it is not already in that format, and a group of channels or a multiplex needs to be conveyed to the digital transmitter network or the satellite uplink to the satellite transponder. The multiplexed signal includes all the television channels and a common data stream with additional information and control data. The encoding and multiplexing for a multichannel group takes place subsequent to the final assembly process at the same location or may take place at a common distribution point elsewhere.
- (d) The first step in broadcasting signal distribution is the linking from the final assembly point (presentation studio or channel assembly facility) to the primary local transmitter and/or common distribution point from where the signal goes to multiple destinations. Linking could be done by studio-to-transmitter links, or microwave links or optical fibre cables depending on the bandwidth required and the options available.
- (e) For community and metropolitan broadcasting services the process is concluded with delivery to and transmission by the local terrestrial transmitter. Should additional transmitters be required to provide the designated coverage within the community or metropolitan area, the links from the primary to the additional transmitters may be

provided by means of off-air rebroadcasting if technically feasible otherwise by using more links. All these actions are a part of the broadcasting signal distribution process.

- (f) Terrestrial signal distribution for regional or national services would need many transmitters to be used to provide the required coverage (access). The broadcasting signal distributor must plan how the required coverage can be obtained by determining which existing and new sites need to be used and determine the required transmission characteristics taking topographical conditions and population distribution into account. The broadcasting signal must be delivered to each of the transmitters that is generally done by means of a satellite distribution system in South Africa. Before satellite technology was available it was done by means of microwave lines and before that by overhead telephone wires. Rebroadcasting is also done to a limited extent for analogue television transmission but is used extensively for FM sound broadcasting. The primary satellite distribution needs to be done by means of a C-band satellite distribution system that is not normally subject to rain fading. A secondary satellite distribution system is required to ensure that the large national audience is not subjected to the risk of possible extended breaks on the C-band system.
- (g) The national transmitter networks are segmented into regional networks to allow the insertion of regional programmes. Regional transmission switching centres are established near SABS regional studio centres in Cape Town, Durban, Bloemfontein and Port Elizabeth. Satellite downlinks and fixed electronic communication lines provide the input signals with backup options to the regional switching centres. Monitoring of the regional transmissions is carried out and switching when required to backup feeds or regional broadcasting inputs.
- (h) Signal distribution for national services may of course be carried out by means of Ku-band direct-to-home satellite transmissions depending on the market strategy of the broadcaster. The gap between terrestrial and satellite transmission in terms of cost to the viewers will narrow with the migration to digital terrestrial transmission. The current balance between terrestrial (80%) and satellite (20%) is probably mostly driven by the difference in reception cost of analogue terrestrial and digital satellite, and the fact that satellite channels, as far as the additional channels are concerned, are subject to subscription fees. When the same free-to-air programming with some new services to serve as an incentive are available from digital terrestrial transmissions the balance between terrestrial and satellite reception use is expected to change. In particular when the cost of terrestrial and satellite signal distribution on a national scale is also considered.
- (i) A signal distribution network including all the distribution links and the transmitters must be subject to operational control and management to ensure quality of service with minimum downtime, interruptions and signal degradation over the network with the provision of an end-to-end support service to the respective broadcasters. If the network or certain elements thereof are provided and operated by different service providers it will involve more difficulties and require more effort to maintain the required quality of service and to resolve operational problems. Experience has been

gained on this matter with leased audio and video lines from the fixed line operator. Different signal distributors providing parts of the network will require that the broadcasters expend additional effort to manage quality of service, coordinate operations and resolve operational problems. They would need to employ expertise in the broadcasting signal distribution field. This is perhaps why, as mentioned in the discussion paper, broadcasters prefer to procure an end-to-end service.

- (j) The primary interest of the retail market (clients of the broadcasters) is programme content. The delivery of the signal to listeners and viewers is a secondary but essential interest. When operational, technical and reception problems occur with respect to signal delivery these problems must be attended to by the signal distributor as a part of its service to the broadcaster.
- (k) A signal distributor of regional and national coverage must have central and decentralised operational and service infrastructure with competent personnel and facilities located at suitably distributed service centres. The service structure must be supported by an adequate availability of high technology instrumentation, tools, transport, communication facilities and telemetry systems monitoring transmitting and supporting equipment functions. The support centres must carry out continuity and quality monitoring of all transmissions and restore transmission when breakdowns occur.
- (l) A signal distributor must finance new transmitting facilities and supporting infrastructure and the replacement of obsolete equipment and facilities in addition to the financing of all operational expenses in order to provide and maintain on-going signal distribution and respond to new requests.

### **2.1.3 The description of activities involved in Contribution Transmissions**

The character of the activities involved in transmissions to contribute to broadcast production or live transmissions, or other methods to obtain broadcast material, are described in the sub items below. Again, the descriptions are meant to illustrate what transmission activities are used but do not represent or reflect a multitude of supportive activities that may be involved.

- (a) Contribution transmissions or links are often single channel point-to-point unidirectional transmissions from the location of a distant production point such as an outside broadcast, often sport, or a point where broadcast material is available, to the production or presentation centre where it is required. Sophisticated productions may require bidirectional channels or more than one channel. Additional sound channels may be used for multi-language and communication purposes.
- (b) Contribution transmissions may be of a permanent nature for on-going delivery of broadcasting material or from outside broadcasting points that are often used. Contribution transmissions may also be of a temporary nature for events that are not recurring or not often enough to justify a permanent connection.

- (c) Local external events with temporary links for the contribution transmissions may use portable UHF radio links, including microwave links if greater bandwidth is required. The links may be owned by the production entity or by an independent service provider. For permanent contribution links it is more likely that local copper wire or fibre optical links leased from a fixed line ECNS would be used.
- (d) For distant external events within or external to South Africa it is more likely that satellite links would be used with either transportable uplink transmitters or via local links to fixed uplink transmitters or via fixed line electronic communication networks including the undersea cables. The on-going method to provide permanent links between the different production studio and programme presentation centres within South Africa that are often used for the different programme services is to lease links from an ECNS licensee.
- (e) Another method not involving electronic communications is that the broadcast material may be recorded onto magnetic or optical storage media that will be physically transported to its destination.
- (f) The conclusions from the above is that any or a combination of the described activities may be required for a specific production or event and that different suppliers may be used. Signal distributors are not normally involved in this business unless they offer it as another separate service in their portfolio. The service providers are normally other ECNS licensees and independent business entities who have the different types of links and capacities available and who are engaged in a competitive market. They are not considered to be engaged in “broadcasting” in providing contribution links but merely in the conveyance of electronic communications. There is no need to address the contribution transmissions in the regulatory framework for broadcasting transmission services.
- (g) Contribution transmissions are not intended for reception by the public as it is still subject to certain production or assembly processes before it reaches the presentation stage, almost immediately in the case of a live broadcast or later in the case of a recorded production.

#### **2.1.4 The description of activities involved in Production Distribution Transmissions**

- (a) Production distribution may occur between different broadcasters or to foreign destinations and may be arranged on a temporary or a permanent basis. The permanent linking between production studio centres may also be used for this purpose. Links may be made up for a particular event by connecting existing and temporary facilities. For major international events, a number of links may simultaneously be used on a point-to-multipoint basis to many broadcasters and countries.
- (b) The nature of distribution transmissions and the manner of arranging them are very much the same as for contribution transmissions. They are also not considered to be “broadcasting” but merely the conveyance of electronic communications for the

broadcasting material. These transmissions are also not intended for reception by the public.

## **2.2 Question 2**

*Do you agree that retail and wholesale leased lines provided for broadcasting transmission conveyance should be considered in a separate market review by the Authority at some point in the future? If not, please provide a detailed response and rationale for your view.*

Response to the various parts of the question follows below. The detailed response provided to Question 1 must also be taken into account.

- 2.2.1 The classifications of retail and wholesale leased lines are not supported. It is unnecessary and confusing. If it is referred to in the context of Broadcasting Transmission Services, then a distinction must be made between broadcasting signal distribution for reception by the public and contribution or distribution links that is not meant for public reception.
- 2.2.2 Broadcasting signal distribution may include the use of leased lines for example between a presentation centre and the primary local transmitter or to the satellite uplink transmitter station or where a different programme needs to be injected at a particular transmitter. These links (leased lines) can be obtained from a fixed line ECNS or self-provided.
- 2.2.3 Contribution and distribution links often use leased lines obtained from a fixed line ECNS.
- 2.2.4 Leased lines for broadcasting transmission conveyance in the context of the discussion in the preceding items is available on a competitive basis from the ECNS fixed and mobile licensees who have optical fibre capacity and microwave facilities available, as well as other service providers that may only have frequency spectrum licences.
- 2.2.4 A separate market review at some point in the future by the Authority is not required.

## **2.3 Question 3**

*Has the Authority correctly characterised the broadcasting value chain in South Africa? If not, please provide additional information.*

In order to respond to this question a few related issues need to be dealt with first before the response to the matter of the characterisation of the broadcasting value chain is elaborated on.

- 2.3.1 The issue of wholesale broadcasting transmission on terrestrial networks as described in the Discussion Document is confusing and does not explain Sentech's strong position in the possession of terrestrial broadcasting transmission infrastructure adequately or properly.
- 2.3.2 Listeners and viewers are the consumers of broadcasting services and are thus the clients of the suppliers (broadcasters). They represent a retail market as stated elsewhere in the Document.

2.3.3 The broadcasting signal distributor delivers the product (programme services or channels) on behalf of the supplier (broadcaster) to the retail client. The delivery service is equivalent to a courier service where items purchased are delivered to the purchasers through distributed depots. It is also similar to the internet where websites provide information and transactions to consumers via an ECNS. The usual meaning of wholesale does not apply to these scenarios. If conventional wholesale and retail trade is to be applied then the broadcaster is the wholesaler and the broadcasting signal distributor the retailer, however, the signal distributor does not buy the programmes from the broadcaster and resells them to the listeners and viewers; it merely conveys (distributes) it and must deliver it where required in good order. This process or activity is the same in principle for all the technologies, be it terrestrial transmission, satellite transmission or transmission via optical cable or copper wire.

2.3.4 The discussion of Sentech's position in 3.6.1 of the Discussion Document dealing with the value chain for terrestrial broadcasting transmission does not belong in that part.

2.3.5 The main items in the value chain for broadcasting in South Africa consist of the following (There are many critical sub items involved but for the sake of simplicity it is not included in the sequence that follows, neither is the sequence necessarily in the order given):

Programme production and acquisition – programme post production – advertising – continuity presentation – compression and multiplexing for DAB/DVB – digital decoder management - broadcasting signal distribution – supply and support of digital decoders - reception by listeners and viewers.

The value chain quoted applies to digital broadcasting. For analogue broadcasting the activities related to compression and multiplexing for DAB/DVB, digital decoder management and the supply and support of digital decoders simply falls away with only the relatively simple standard receivers involved.

2.3.6 Considering the forgoing discussion, the broadcasting value chain in South Africa was not correctly characterised.

## **2.4 Question 4**

*Has the Authority correctly characterised the potential competitive dynamics of alternative distribution platforms in South Africa?*

According to the statements in the Discussion Document the potential competitive dynamics of alternative distribution platforms in South Africa are being underestimated. Supporting arguments in respect of the underestimation view are provided in the following sub items.

2.4.1 The migration to digital terrestrial transmission will change the dynamics and the market in South Africa.

(a) The balance between the use of terrestrial and satellite reception that is presently at 80/20 is likely to change to a higher level of satellite use.



- (b) Terrestrial reception will become more expensive with the requirement to acquire a digital IRD. The cost differential between satellite and terrestrial reception will decrease substantially.
- (c) There is a financial risk with the huge capital investment required to migrate to near 100% digital terrestrial television transmissions that may result in an overinvestment that cannot be recovered or would not be efficiently used. Only about 20% of high power transmitting stations provides population coverage that is profitable in terms of the proportional revenue generated for the broadcasters and the proportional cost of signal distribution. Beyond that population density the terrestrial transmissions are subsidised by the income from the higher density areas. The risk can be reduced by limiting the digital terrestrial transmission coverage and making greater use of the existing digital direct-to-home satellite transmissions.
- (d) The consequence of the foregoing is that the attractiveness of many high power terrestrial broadcasting high sites will decrease.
- (e) Some high sites are not attractive to use for digital terrestrial transmissions as they are not well sited with respect to the population concentrations in their vicinity.

2.4.2 The potential growth on fixed network technology is under estimated.

- (a) There is considerable investment being made in optical fibre network capacity at present, both internally in South Africa and externally with undersea cables. All along the national roads fibre optic cables are being laid that seems to provide for four operators. It is also well known that optical fibre cables are being laid in the metropolitan areas and large towns. The increase in fibre optic capacity will drastically increase internet capacity and drive down access cost.
- (b) At the same time ADSL broadband copper connectivity has become well established. The cost of ADSL connectivity is coming down. Data speeds and capacity available on ADSL connections are already sufficient to support Web TV and IP TV. Young technology-advanced persons are starting to use this option and some have already cancelled their satellite television subscriptions as they prefer the Web TV and IP TV options. This is the way that all new technologies start off and with time they increase and accelerate their market penetration. There are still a few bottlenecks in the system but these will steadily decrease.
- (c) At this stage this technology may not be considered as an alternative but it will gradually eat into the market and reduce the market size for digital terrestrial television transmission in the conventional manner.

2.4.3 For mobile television via the cellular communications networks it is not the capability of the 3G technology that must be looked at in this discussion but rather that of the 4G or LTE technology that is around the corner. Alongside the DVB-H technology, that is dedicated to broadcasting and is already operational in some areas, it will also have an impact on the market for digital terrestrial television transmission in the conventional manner. The technical and transmission requirements for these technologies in terms of

transmission sites are different to that of conventional terrestrial broadcasting in that they are unlikely to generally require the use of high power transmissions from high sites. They would more generally follow the network design and transmission sites requirement used for cellular communications. Only a few high sites may be attractive for DVB-H technology.

2.4.4 Cable TV in terms of conventional dedicated cable TV systems that was originally established with analogue technology and later migrated to digital, that is popular in Europe and North America, is not considered to be an option for South Africa. They are actually fixed line networks providing cable TV and started to provide other forms of electronic communications over time. Many of these operations are experiencing financial difficulties that will increase as the competitive technologies increase their market share. The only "cable TV option on a fixed network basis" that is expected to grow in South Africa is the Web TV and IP TV via ADSL. Section 3.8.3 in the Discussion Document is really dealing with the ADSL option that is not generally referred to as cable TV as it is not dedicated to television broadcasting.

2.4.5 In conclusion, the collective impact of these new technologies must not be underestimated. These technologies will be deployed by ECNS operators that are not primarily active in the broadcasting sector but who will have the capacity to include the distribution of broadcasting products in the future and will want to enter the market to compete with the incumbents.

## 2.5 Question 5

*How do the transmission requirements of broadcasters differ, depending on the geographic footprint of the licence?*

The transmission requirements of the different broadcasters can be summarised as follows, starting with sound broadcasting and progressing to television.

- (a) The transmission requirement for sound broadcasting is for terrestrial radio transmission due to the dominant portable and mobile reception mode used by the listeners.
- (b) The free-to-air sound broadcasting services operate on a narrow casting basis with the market segmented on a programme profile, language and geographic basis. The individual coverage and transmission requirements relate to the segmentation and the licence areas granted.
- (c) Sound broadcasting signal distribution dominantly uses the VHF/FM technology with single or a couple of transmitters for metropolitan or community coverage, and with networks containing 10 to 20 or more transmitters for regional coverage and over a 100 transmitters for national coverage, for a single service. Any multi-transmitter network providing coverage to a designated area must do so with continuous blanket coverage (with some overlap to counter topographical shadows) and uses both high power high site and low power gap-filling transmissions. In sparsely populated rural areas the coverage becomes sporadic to target population concentrations.

- (d) Each transmitter requires an input signal that is for sound broadcasting often provided by receiving and rebroadcasting the signal from an adjacent transmitter. Large national transmitter networks are configured into regional sub networks to allow for regional breakaways. National programme signals are distributed by C-band satellite and down-linked at regional switching centres and at remote transmitters where rebroadcasting from an adjacent transmitter is not possible.
- (e) Each service has a particular service (licence) area that is derived from demographic requirements for public broadcasting or market allocation for commercial services or the area relating to a particular community for community broadcasting. Financial viability of a service and its coverage (cost thereof) relates to the income stream that can be generated.
- (f) Limited use is made of the medium and short wave sound broadcasting technologies in South Africa and although these technologies are considered to be obsolete they still fulfil certain requirements. Medium wave transmissions are used where FM frequencies cannot be made available or where large area mobile coverage is required that can be provided effectively by high power medium wave transmissions. The high power medium wave transmissions also provide long distance coverage after sundown. Short wave transmissions are only meant for long distance coverage and are used for external sound broadcasting services and to provide access in remote rural areas.
- (g) The public broadcasting television services (SABC 1, 2 and 3) are broad based and seeks national coverage. The existing analogue terrestrial coverages are not the same for all three channels with the SABC2 channel having the highest coverage. Blanket coverage of the whole country is provided for these services with direct-to-home digital satellite transmissions. The SABC2 service coverage includes many areas that are very sparsely populated and where it is the only terrestrial television channel available; however, the provision of terrestrial coverage in such areas is far below a financially viable level which is also the reason why there is only one channel. The public broadcasting channels make extensive use of the high power high sites.
- (h) The commercial broadcasting service (e.tv) is also broad based but as a commercial service it is totally reliant on commercial revenue and thus its coverage level sits at 77% as coverage of the remaining rural areas would not generate additional commercial revenue. This service is only interested in a smaller number of the high transmitting sites.
- (i) The terrestrial subscription broadcasting service (M-Net/CSN) is focused on providing coverage where potential subscribers to the terrestrial signal are residing. In the metropolitan high density areas their coverage is wide spread but beyond the metropolitan areas the coverage is directed to target areas. Their need to use high power high sites is limited to metropolitan and urban areas.
- (j) The television transmitters also require an input signal at each of the transmitters and primarily use satellite distribution as rebroadcasting is not generally feasible for the

analogue television signal. Rebroadcasting generally only occurs at low power gap filling transmitters or at end of the line medium power transmitters in rural areas.

## 2.6 Question 6

*Do you agree that the type of sites required by broadcasters will differ according to the geographic footprint of their licence? The larger the footprint of the licence, the greater the likelihood that broadcasters will need to transmit from purpose built transmission sites.*

The first statement is not really appropriate. The reasons why broadcasters will need to transmit from purpose built sites is not so much to do with the footprint of the licence although there is some merit when large geographic footprints are involved. The reasons why certain purpose built sites need to be established or existing ones used are described below.

- (a) A broadcasting transmitter high site needs to have sight of the largest possible geographic area and of the largest surrounding populated areas, all with good propagation conditions. This condition is determined by the site elevation and the surrounding topography but it must also be possible to make adequate frequency assignments to the selected site, to create road access and to provide an electricity connection at reasonable cost.
- (b) It is quite difficult and time consuming to acquire a new high power high site with good attributes in populated areas considering the environmental approval process, the availability of land, building an access road, providing electricity and the costs involved.
- (c) The existing high sites that are owned by Sentech were mostly acquired in the 1960 to 1980 period by the SABC when it was providing its own broadcasting signal distribution. At that stage there were few existing high sites owned by another party available for consideration. The microwave sites for the fixed line operator were not yet developed when sites had to be acquired for broadcasting in an area or co-location was not possible due to different propagation requirements. The selection of the sites was at the time governed by the requirements for the VHF/FM network design for the 87.5 to 108 MHz frequency band. Although it was contemplated that television would eventually come (15 years later) the site selection was not optimised for television transmissions in the VHF and UHF broadcasting bands. Consequently a number of the sites are not really suitable or cost efficient for television even though they are used for this purpose and require gap-filling to overcome deficiencies. The use of only the UHF/TV-band for digital terrestrial transmission will exacerbate the situation.
- (d) Optimum high sites are rare and therefore existing sites with such characteristics are valuable. The valuation of a high site in its usefulness for broadcasting should be determined in terms of the value of the service it can deliver, in particular the population coverage number, in comparison to other options and should be adjusted in terms of the inflation rate. The existing site owner should not be penalised for owning a valuable asset. Access to such a high site should not be given to other parties at a giveaway price.

- (e) The available accommodation on the mast for high gain and high power omnidirectional transmitting antennas is limited and a critical issue. These antennas are large and must be located at the top of the mast. Many of the existing masts have three transmitting antennas stacked on top of the mast with the FM antenna at the bottom, the VHF/TV antenna in the middle and the UHF/TV antenna at the top. The UHF/TV antenna in a third position at the top was not a part of the original design and the mast had to be strengthened to add it. At stations where the VHF/TV spectrum is not used, the UHF/TV antenna sits on top of the FM antenna. Each of these antennas has limitations on the number of frequencies, FM or TV, it can accommodate and on the combined power handling capacity. If different transmission characteristics are required for FM or for TV, additional antennas need to be installed at lower levels but the antenna gain may have to be lower and omnidirectional radiation may not be possible or difficult and expensive to achieve.
- (f) The drivers for using common transmitting sites and transmitting antennas are:
- (i) Cost sharing in using unique and expensive sites.
  - (ii) The ability to create equitable and competitive coverage and signal levels.
  - (iii) The ability for the listeners and the viewers to have equitable signal levels and use common receiving antennas where required. Signal levels at a reception point must not differ by more than 13 dB to avoid interference conditions.

### 3. QUESTIONS FOR STAKEHOLDERS FROM CHAPTER 4

#### 3.1. Question 8

*Do you agree that the appropriate wholesale broadcasting transmission service is a Managed Transmission Service? If not, please provide information on an alternative product definition.*

There is no reasoning or definition provided on why it should be referred to as a managed transmission service. The known terminology as established in terms of the IBA Act and taken up again in the Broadcasting Act is broadcasting signal distribution. An explanation was given about this in item 2.1.1(a) above where the product name and definition is provided.

#### 3.2. Question 9

*Do you agree with the list of retail markets that have been identified by the Authority?*

- (a) The list of retail markets is questionable as it is linked to transmission technology rather than the nature of the broadcasting services. Coverage and reception cost has an impact on the market size. Consumers want to buy or access the programme content and are not interested in the delivery technology per se. Broadcasters will select the broadcasting signal distribution platforms that they prefer in their business strategy and may use different platforms for the same programmes.

- (b) Subscription is another factor and creates a different market mainly due to the subscription cost and the substantial difference in the programming involved.
- (c) The disregard of digital terrestrial television in the Discussion Document cannot be accepted. Recent announcements by Government and the publication of the Amendments for the Digital Migration Policy in Government Gazette No. 34538 on 19 August 2011 stipulate a completion of the migration process by late 2013. Then there will almost only be digital terrestrial television transmissions as the analogue transmissions will have closed down. A market analysis on a position of only DTT trails going on is therefore not appropriate. Even though there may be a delay in the completion of the migration process, a large portion of it will be completed in time according to the policy involving the more densely populated areas and providing high percentage population coverage.
- (d) The distinction between satellite and terrestrial transmission is not considered to be valid based on the future scenario. With a migration to digital terrestrial television transmissions the reception cost difference between satellite and terrestrial transmissions will decrease and more attractive terrestrial subscription packages and perhaps free-to-air packages will be available. The free-to-air television channels are also available on satellite, practically speaking as free-to-air channels. The conditional access involved for the free-to-air channels is not for subscription purposes but to limit cross border access and the consequential infringement of copy right.
- (e) If the retail markets are based on transmission technology, then each new technology will have to be classified as a separate retail market. The future broadcasting signal distribution platforms that are starting to emerge, i.e. fixed line IP TV and Mobile cellular will not create separate new markets but will compete with the relevant existing markets.
- (f) Considering these comments it is suggested that the retail markets are rather as follows:
- Sound broadcasting
  - Free-to-air television broadcasting
  - Subscription television broadcasting

### **3.3. Question 10**

*Do you agree with the list of wholesale markets for MTS that have been identified by the Authority?*

The wholesale market for broadcasting signal distribution should rather be considered on the nature of the broadcasting signal distribution and the type of operation required. The transmission technology type and the broadcasting service licensing category should not determine the market sectors. Therefore it is suggested that the market products should rather be as follows:

- (a) Broadcasting signal distribution for small networks used for metropolitan and community broadcasting. This service would involve single or a small number of stand-alone transmitters for sound broadcasting and television free-to-air and subscription

broadcasting. Such a service could also be provided by relatively small entities operating only in and around the areas they serve. They could make use of existing infrastructure and supporting services. It would be relatively easy to set up services of this nature requiring only a few persons with the necessary expertise, little infrastructure and little capital. They do not necessarily have to own the transmission assets and can acquire external support services. This scenario does not include high power sophisticated transmitting stations in metropolitan areas such as that at the Sentech Tower in Brixton, Johannesburg.

- (b) Broadcasting signal distribution for large regional or national broadcasting networks including sound broadcasting, free-to-air and subscription television broadcasting. This service requires substantial organisational abilities and infrastructure, many staff with the required expertise, a service network spread across the region or country, the ability to deal with all the network elements required to handle the broadcasting signals from its point of origin to the whole coverage area, the ability to maintain the assets in good order over their life time and maintain a set level of service quality, the ability to attend to reception problems and the capital to fund new assets or replace obsolete assets. In-house capacity is required for most activities due to the specialist nature of the network infrastructure and equipment involved, the unavailability of technological resources in many parts of the country and cost efficiency.
- (c) Infrastructure leasing for broadcasting signal distribution and other radio communications. The high cost of supporting infrastructure and the capacity available and in demand, creates a market in which the various network operators can sell their spare capacity at their base stations or transmitting stations and where other operators require the use of such infrastructure to deliver their services. This market segment has been active for a long time with most of the entities owning high sites leasing capacity. The supporting facility capacity sold to another party depends on the requirements of the other party. The capacity that may be offered includes:
  - (i) Use of access roads, space on site for an own building and mast, or space inside established buildings, access to the electricity connection to the site, standby electricity generator and space on mast for antennas. These facilities are the most often leased to other radio communication providers.
  - (ii) Sharing of an existing transmitting antenna, feeder cable and combining filter. So far these facilities have not normally been offered.
- (d) Satellite up-linking services for broadcasting purposes. Satellite space ports or earth stations are sensitive installations in terms of their location, possible interference with other radio communications and safety considerations with respect to the very high level of the radiated power beams at very high frequencies. Earth stations can be used for broadcasting and other satellite services. It requires a highly specialised team of technical personnel to operate it. There are a number of established satellite earth stations in South Africa, owned and operated by different parties. The downlinking side is separate from the up-linking operations as the downlink installations are either domestic reception installations for direct-to-home transmissions or are reception

installations at terrestrial transmitting stations to provide distribution feeds for the sound and television broadcasting transmitters.

### **3.4. Question 11**

*Do you agree that MTS for satellite and for Terrestrial are in separate markets?*

- (a) You cannot apply a simple division just because the technologies are different and that there is currently a difference in the nature of the broadcasting service involved. It is neither clear what purpose it would serve to make this division. A proposed division of the market was described in the response to Question 10.
- (b) With the migration to digital terrestrial television transmission and a capacity of up to 20 channels with MPEG4 technology for each of the two digital terrestrial transmission multiplexes, the service profile that could be offered does not differ greatly to that available on satellite. On satellite there is not only one subscription package but several options with different numbers and types of channels and subscription fees. The terrestrial option should fit in alongside these options.
- (c) From a market viewpoint and the fact that the digital satellite and digital terrestrial technologies are similar, there should not be a division between the two. The question should rather be asked why terrestrial transmission should be used at all. The answer lies in that in high density populated urban areas and with many multi-dwelling building structures involved it is more difficult to install individual satellite receiving antennas or costly to provide communal reception and distribution systems. There is also a collective cost saving for the public on the remaining cost difference between satellite and terrestrial reception. However, multi-dwelling structures may in any case require costly cable systems to provide internal signal distribution to the individual dwellings. Therefore even in these urban areas there may be use of the satellite transmissions that are often preferred. Lastly, the terrestrial option also provides for mobile reception that is not feasible with reception from satellite unless tracking is used.
- (d) In the sparsely populated rural areas the cost of terrestrial signal distribution is prohibitive, in particular for television, and it is from a cost to the broadcaster viewpoint cheaper to rely on satellite transmission. A financial analysis would provide an indication of where the break point is.

### **3.5. Question 12**

*Do you agree that MTS for Radio and MTS for Television are in separate markets?*

- (a) The signal distributions for radio and for television are not in separate markets. It is only the transmitters, combiners and transmitting antennas that are different but they are serviced by the same expertise and use common supporting infrastructure.
- (b) The fees charged for either radio or television broadcasting signal distribution must be based on the cost of the radio or television transmission equipment, the output power used, electricity consumption, the proportional use of the supporting facilities and the



servicing required. It was done in this way in the past. The annual percentage increase of fees may end up to be the same but it is not necessarily so as the cost analysis for radio and television would be done in separate streams. In any case, the amount of the fees charged for radio and for television transmissions are substantially different.

- (c) Difficulties mentioned with respect to frequency changes and retuning of transmitters that might be necessary is overstated. What may be much more of a problem is when one transmitting site may be exchanged for another and the coverage area changes drastically.
- (d) The statements under section 4.4.2 in the Discussion Document are generally speaking incorrect and irrational. It is also not true that it is only Orbicom and ODM that have the potential, addition to Sentech, to provide signal distribution for radio. Only the second last paragraph makes some sense.

### **3.6. Question 13**

*Do you agree that MTS for local radio broadcasting is in a separate market to MTS for national and/or regional radio broadcasting (Le. non-local radio broadcasting?)*

- (a) The statement is agreed with but with the responses given to Question 10.
- (b) The statements about the frequencies do not make sense. Neither does the statements about substitution between local and national and/or regional transmitter networks and interference. It is so that local broadcasting may use limited power and that there is a problem with co-siting high and low power transmissions in the FM or TV frequency bands where the radiated power differential is greater than 13 dB. The problem actually occurs in the respective receivers where attempts to use the signal from the lower powered transmission will be subject to interference from the higher powered transmission due to overloading of the receiver front end unless a filter is used.

### **3.7. Question 14**

*Do you agree that MTS for Analogue and Digital broadcasting should be considered in the same market?*

- (a) Yes, definitely.
- (b) The end of the terrestrial analogue television transmission business is in sight and will be succeeded by the digital business in this area.

### **3.8. Question 15**

*Do respondents agree that the geographic markets for all markets defined for MTS on the terrestrial network are national in scope?*

- (a) The discussion in the document is rational but although a geographic market division is not justified, the reality is that there is a possible market division as described in the response to Question 10.

- (b) It is not viable for small enterprises to offer their services on a national scale. It would be on a regional or a metropolitan scale.
- (c) Community broadcasters usually make use of external service providers even when they have a self-provisioning licence. They take responsibility for the signal distribution licence and outsource the technical work to be done. The ECNS licence conditions for small enterprises in broadcasting signal distribution seems to be excessive.
- (d) The significant numbers of community broadcasters that do not make use of Sentech's services do so because they cannot afford the grade of service with the fee that Sentech provides. The fees are derived from the cost structure that goes with infrastructure that Sentech is required to possess and fund. It is natural that small enterprises not involved in large operations, high technology and high service levels with back-up can provide a cheaper service. As they service simple installations they do not require the same expertise, infrastructure and backup that Sentech needs for the large networks with high and low power installations. There are many examples in the market where both large and small enterprises work side by side and offer different levels of services and prices.

### **3.9. Question 16**

*Do respondents have any views on the correct geographic market definition for satellite broadcasting services? Should it be defined as national or transnational?*

- (a) It should be defined as national as that is in any case the limit of jurisdiction for ICASA.
- (b) The significant aspect of satellite broadcasting is the uplink transmitting station as stated in the response to Question 10.
- (c) The uplinks external to South Africa are in any case provided by suppliers licensed in the relevant countries and are beyond the jurisdiction of ICASA.

### **3.10. Question 17**

*Do respondents have any views on why any other licensee that owns high sites (apart from Sentech) would not wish to provide wholesale broadcasting transmission services?*

- (a) Other licensees and high site owners may be in a different sector of electronic communications and may not wish to become involved with the broadcasting sector with different technologies and expertise. Broadcasting signal distribution demands different expertise and training, measurement equipment, spares stock and operational support.
- (b) Broadcasting signal distribution transmission equipment, in particular high power, such as the transmitters, combining filters and transmitting antennas are quite demanding on space in buildings, space used on masts and the structural loading, compared to other radio communication services. Generally speaking, the broadcasting demands do not fit in at the high sites for other radio communications. The converse is that the other radio communications can often easily be accommodated at broadcasting high sites such as those owned by Sentech.

#### 4. QUESTIONS FOR STAKEHOLDERS FROM CHAPTER 5

It needs to be commented on that the various statements in this chapter better reflects the various factors involved and the way in which they are described. The chapter does make a strong case of the Significant Market Power that Sentech has. The chapter does not provide the background on how that situation has come about. A reader that may not be familiar with the unwritten background may get the impression that the Sentech position has been reached in an improper way and that it must be dismantled. The responses to the questions below will attempt to provide some of the background where it is considered necessary and will also correct statements that are wrong.

##### 4.1. Question 18

*Do you agree with the initial views of the Authority that Sentech has SMP in the market for MTS for national terrestrial television broadcasting?*

(a) Sentech currently has SMP for national terrestrial television broadcasting signal distribution in the existing analogue terrestrial television domain. The following information may be useful:

- The current terrestrial M-Net and CSN transmitters on Sentech sites are owned and operated by Sentech in terms of a contact with MultiChoice (at least up to 2000). The service was not provided to Orbicom.
- There are hundreds of low power analogue television relay transmitters not on Sentech sites that are not included in the quantity of Sentech transmitters and are serviced by private entities.
- Sentech provides service to a number of Orbicom low power transmitters. Apart from a few exceptions, the other transmitters on the Orbicom list are private low power analogue television relay transmitters serviced by private entities.

When the migration to digital takes place, Sentech will lose its SMP position in the analogue terrestrial television domain. The only influential part remaining are the high sites and support infrastructure. With digital transmission using software driven transmitters the operational activities will to a significant extent shift to centralised expertise connected via data lines.

(b) It is not a fact that Sentech will have SMP in the digital terrestrial television domain. The transmissions for the two digital multiplexes (SABC and M-Net/e.tv) are likely to be operated by Sentech and Orbicom respectively. The actual situation will only be known when signal distribution contracts are concluded.

(c) MultiChoice/Orbicom may use Sentech sites for digital terrestrial television transmissions as far as it suits their requirements. Not all Sentech sites will suite them as there are a number of sites that are not well located in terms of population concentrations around them and where topographical obstructions exist. The use of

the UHF television frequency band only and not the VHF band where it is currently used, will impact this situation. Alternative sites will be found and used.

- (d) Mobile digital television (DVB-H) may only use a few of Sentech sites that are suitable for mobile market areas.
- (e) Mobile digital television via the mobile communications platform will use the sites and infrastructure of the mobile electronic communications network operators.
- (f) New distribution platforms for television such as IP TV on ADSL will decrease the Sentech SMP position.
- (g) If the economy of signal distribution with respect to population density (people served per transmitter and revenue generated) is taken into account and if broadcasters wish to avoid cross subsidisation and reduce their signal distribution costs, then greater use will be made of direct-to-home satellite transmission rather than terrestrial transmission. The digital terrestrial coverage would be less than the current analogue terrestrial coverage.
- (h) One of the reasons why Sentech has SMP and why other parties have not entered into the market is that Sentech's tariffs were too low for another party to enter the market. Sentech's return on investment is relatively low that is typical for a large infrastructure company and it has assets available with very long life times that were procured a long time ago on which the tariffs are based. These assets include access roads, sites, tall steel masts, and buildings. As a large operator with many sites and clients, Sentech of course has good economies of scale that benefit the clients. If these assets had to be purchased today the tariffs would have been much higher.

#### **4.2. Question 19**

*Do you agree with the initial views of the Authority that Sentech has SMP in the market for MTS for the purpose of national terrestrial radio broadcasting (nonlocal)?*

- (a) Sentech has SMP for national and regional terrestrial sound broadcasting signal distribution.
- (b) Sentech, or before it the SABC, never had statutory exclusivity over the high sites. The SABC had broadcasting exclusivity until the early eighties and owned the sites. When Sentech was incorporated as a subsidiary of the SABC in 1992, the signal distribution operations with assets were sold to Sentech as a going concern. Sentech was separated from the SABC by an Act of Parliament in 1997.
- (c) An aspect to note is that there is not competition in national and regional terrestrial sound broadcasting in South Africa. There is competition in metropolitan sound broadcasting. The demand for signal distribution is therefore less.
- (d) The regional commercial sound broadcasting services were originally for many years SABC services and were established a part of the VHF/FM transmitter roll out in South

Africa in the period 1960 to 1980. These transmitters were co-sited when the sites were established.

- (e) The comments provided in 4.1(h) also apply to national and regional terrestrial sound broadcasting signal distribution.
- (f) An issue for competitive broadcasters is that they want the same coverage and signal levels as their competition which is much influenced by the sites and infrastructure that are used.
- (g) The matter of using common sites is not so critical for FM sound broadcasting as directional receiving antennas are generally not used for reception. The use of the RDS technology on FM car radios makes the tuning and switching from one transmitter to another very easy without intervention by the listener. The listener is not even aware of which frequency is being used. Portable receivers carried by persons are easily retuned and only move around in relatively small areas or are stationary at home.
- (h) FM transmitting equipment is broadband and can operate on any frequency in the FM band. FM transmitter installations can be done in simple ways that will reduce cost however the economy of single transmitter installations may not be better.

#### **4.3. Question 20**

*Do you agree with the initial views of the Authority that Sentech has SMP in the market for MTS for the purpose of national terrestrial radio broadcasting (local)?*

- (a) Sentech has SMP for local terrestrial sound broadcasting signal distribution by default due to a weak interest in this segment but not to the extent that it has for regional and national sound broadcasting services.
- (b) The comment made under Question 10 in 3.3(a) applying to small enterprises should also be applied here.
- (c) The self-provisioning of signal distribution in this sector does not mean that the community broadcasters are self-sufficient and have the necessary infrastructure and expertise. Usually the community broadcasting licensee takes the responsibility demanded by the self-provisioning licence but contract in the expertise to carry out of the necessary work.
- (d) The reasons why there is insufficient competition in this market sector should be further investigated. It is not due to the domination of Sentech or technical reasons. It may be that the Sentech tariff is too good or it may be due to the viability problems within the sector. Sentech's experience in this sector on commitments to the service by the community broadcasters and payment for services rendered may be useful.
- (e) For community broadcasting all the transmitter installations are medium to low power and can quite easily be accommodated on various site options with relatively simple installations.

#### 4.4. Question 21

*Do you agree with the initial views of the Authority that the market for MTS for the purpose of satellite broadcasting is effectively competitive and falls outside of its jurisdiction due to its trans-national nature?*

- (a) It is agreed that the market relating to satellite broadcasting is competitive. There are more potential service providers than those referred to in the Discussion Document.
- (b) The statement in the second paragraph of item 5.5 of the Discussion Document (last two lines) is not correct. Reference is made to “satellite broadcasting transmission service providers” by which it is assumed that satellite operators are referred to. It is correct that they are not required to be licensed in South Africa as they are licensed via their resident country with the ITU. In this licensing process the countries within the downlink footprint must agree to the downlink being deployed to cover them. However, satellite transmissions are carried out via transponders aboard the satellite that receive the uplink signal, convert the carrier frequency and transmit the signal back to earth within a pre-determined footprint. The satellite transponder thus acts like a mirror. The consequence of this is that the transmission content of the downlink is determined by the uplink. Any uplink in South Africa is under the jurisdiction of ICASA and is licensed by them.

#### 4.5. Question 22

*Do you have any data regarding the market, other than that used by the Authority to make its initial views?*

I do not have any other specific information or data apart from my management and operational knowledge gained when I was at the SABC and Sentech.

### 5. QUESTIONS FOR STAKEHOLDERS FROM CHAPTER 6

#### 5.1. Question 22 (Numbering error in the Discussion Document)

*Do the existing Facilities Leasing Regulations adequately address the potential challenges with respect to entering into a Master Service Agreement with Sentech?*

The existing Facilities Leasing Regulations seems to adequately address the potential challenges with respect to entering into a Master Service Agreement with Sentech.

- (a) It is noted that facilities leasing agreements are to be concluded between an ECNS licensee as the provider and any person licensed in terms of the Act, and persons providing services pursuant to a licence exemption requesting electronic communications facilities.
- (b) It is assumed that any person licensed in terms of the Act will include licensed broadcasters who want to self-provide signal distribution in terms of a licence granted to them and persons in possession of an ECNS licence to provide broadcasting signal distribution.

- (c) The fact that there are only two ECNS licensees for broadcasting signal distribution indicates shortcomings or barriers in the licensing process. ICASA should conduct an investigation into this matter, in particular with parties that are providing services to broadcasting licensees who have self-providing signal distribution licences.

## 5.2. Question 23

*Are any amendments to the regulations needed to better cater for the potential consequences of SMP in the defined markets, or are separate regulations needed? (Please explain) ?*

- (a) The existing facilities leasing regulations should be applied but amendments considered if requested by any SMP Operator and broadcasters.
- (b) A facilities leasing agreement would have to be tailored for broadcasting signal distribution. In order to implement facilities leasing for broadcasting signal distribution any SMP Operator should be declared and be required to comply with the ECA and the regulations. The SMP Operator should then produce a pro forma licence agreement and submit it to ICASA to determine compliance.

## 5.3. Question 24

*Is access an appropriate remedy in light of structural concerns with the market (high sunk costs, no possibly of a new entrant in the short term, etc)?*

Access is a reasonable remedy if the risks to the entity having SMP are taken care of either in regulations made by ICASA or in the RO and a Master Service Agreement. The risks involved are the following:

- (a) Damage to the commonly used equipment and resources, either by incompetence or malicious behaviour that may cause the transmitting station to shut down and the listeners and viewers in the coverage area to lose their reception. Some elements like the combining filter, transmitting antenna feeder cable and the transmitting antenna are particularly sensitive elements that could if overloaded burn out and take extended periods (weeks to months) to repair.
- (b) Security of the station will be impacted by non- Sentech employees entering the station that may lead to tampering and malfunction of facilities or loss of assets or other damage to the station in general. Some of the stations are considered to be critical in terms of security rating and policy. Government will have to be consulted on this matter.
- (c) Many of the Sentech high sites are on farm land with access via common farm roads and purpose built roads. Some of the roads are steep, narrow and require very careful driving. There are many gates that have to be opened and closed diligently to avoid loss of farm animals. Improper use of these roads will lead to accidents, bad relations and claims for losses.

- (d) The Sentech management hierarchy is responsible for safety and possible incidents in terms of the Occupational Health and Safety Act. There are high risks for accidents and damage at transmitter high sites, in particular with activities relating to the masts. Other persons and entities accessing the sites will have to give undertakings and take responsibility for any incidents that they may be involved in.
- (e) The user of access provided must take responsibility for loss of their service when it is due to their own actions.
- (f) Providing access to other parties will incur additional cost that must be recovered together with appropriate fees for the use of facilities. Sentech must receive a fair return on the sunk cost investment for the assets acquired with the incorporation of Sentech and on investments made thereafter.

#### 5.4. Question 25

*Is the proposed Transparency Obligation appropriate, proportionate and justifiable?*

The transparency obligations as they are written in the Discussion Document seem appropriate and justifiable. There are aspects that need to be taken into account:

- (a) The publication of a reference offer would in addition to the statements in the Discussion Document remove possible on-going insinuations about unfair behaviour by the entity having SMP.
- (b) In the fourth paragraph of 6.5.2 masts are excluded in reference to charges being unbundled. Hopefully this does not mean that the use of the mast should not be charged for. The elements that an access user will benefit from and must contribute to the return on investment and maintenance costs are: access roads where applicable, site use, building space used, air-conditioning, fire protection and security systems use, mast space use for own antennas, use of combining filter/ transmitting antenna feeder cables/transmitting antenna/mast and any other supporting facility use. Of course a particular user may not need to use all of the elements and would only pay for those actually required.
- (c) The unbundling of costs are fair but it needs to be taken into account that certain uses cannot be unbundled, for example access to the combining filter, feeder cable and transmitting antenna package that needs to be taken as a whole or not.
- (d) On the matter of a proportionate dispensation, it seems fair that this principle should be applied to determine access cost. The principle needs to apply to both a contribution to the cost of the asset used and the applicable maintenance cost. The implications and aspects involved are as follows:
  - (i) The application of this principle would mean that there should not be standard access charges but that it should be determined for each station used and would depend on the number of current users including Sentech and its clients.



- (ii) The number of transmitters at transmitting stations varies depending on the needs of the broadcasters and their licences.
- (iii) Other aspects like the length of access roads, sizes of buildings, mast heights, transmitter power and antenna gain also vary that would have an impact on sunk and maintenance cost and the apportionment thereof.
- (iv) Another difference is, for reasons of financial viability to the broadcaster, that the backup facilities provided for in rural areas are less than that provided in high density urban areas. The tariffs for transmission in rural areas are accordingly lower.

#### **5.5. Question 26**

*If the obligation is adopted, should the Authority provide a Model RO, or should the obligation rest on the SMP Operator to initiate the RO?*

The SMP Operator should be obliged to compile the RO as they would have the best knowledge of their own system, assets, values and cost breakdowns. The RO should then be published by ICASA for public comment.

#### **5.6. Question 27**

*What is the most efficient and effective way to make an RO available to all affected operators to use as they enter into negotiations with the SMP Operator (i.e. website, Library, etc)?*

The RO's should be published on the SMP Operators and the ICASA websites in a manner that they are easily accessible. Hard copies should be available and provided on request.

#### **5.7. Question 28**

*Should existing agreements be amended to bring them into line with the terms of the published RO? If not, how should existing agreements be treated?*

It would be in the interest of the SMP Operators to address the matter and they would in any case be required to comply with non-discrimination obligations, internally and externally. If they wish to remain competitive and attempt to retain the business of their clients they would have to pay attention to discrepancies. Care should be taken in creating the regime that the regulatory measures do not result in wholesale service pricing/tariff regulation.

## **6. QUESTIONS ON NON-DISCRIMINATION**

### **6.1. Question 29**

*Is the proposed Non-Discrimination Obligation appropriate, proportionate and justifiable? Please explain your views?*

The proposed Non-Discrimination Obligation is broadly speaking appropriate, proportionate and justifiable, however, it may constrain Sentech to exercise its full potential and allow other parties to take advantage on the limitations placed on Sentech. For example, it seems that it will not allow Sentech to differentiate between different subsections of the market by offering different QoS levels with different prices.

Service provision by Sentech complied with the provisions of the Independent Broadcasting Authority Act in the common carrier broadcasting signal distribution licence category that required it “to provide broadcasting signal distribution to broadcasting licensees upon their request on an equitable, reasonable, non-preferential and non-discriminatory basis”.

### **6.2. Question 30**

*Are there other areas in addition to pricing and QoS whether there are concerns relating to non-discrimination?*

There are no other areas but a concern that there could be a requirement from the client (broadcaster) of the facilities user to configure the transmission set-up differently in order to give it a competitive edge over its competitors, or a requirement of the facilities user, that may be construed by other interested parties as discrimination.

### **6.3. Question 31**

*Should existing agreements be amended; and, if so, how?*

The SMP Operator would be obliged to comply with any regulations on this matter and would have to scrutinise all their existing contracts to check compliance and if required, amend them. It is expected that the broadcasters involved in those contracts would also scrutinise them and would also be obliged to comply with any regulations even if it has an adverse impact on them. It is not the function of ICASA to intervene in contracts between licensees unless there is a dispute that requires intervention.

## **7. QUESTIONS ON PRICE CONTROL OBLIGATION**

### **7.1. Question 32**

*Is the proposed Pricing Obligation appropriate, proportionate and justifiable?*

The proposed Pricing Obligation seems to be appropriate, proportionate and justifiable. In assessing whether there is compliance, the following aspects need to be taken into account:

- (a) Sentech was in recent years involved in electronic communications activities that seem to have had adverse financial implications. These financial implications need to be set aside when the pricing for broadcasting signal distribution is considered.
- (b) The broadcasting signal distribution business should be conducted on a positive cash flow basis with a rate of return according to the benchmark for a capital intensive industry.
- (c) Clarity needs to be obtained on any Government funding and determinations made on what portion relating to operational shortfalls should be written off and what portion relating to new asset funding (digital transmission equipment) must be paid back. The payback period and the rate of interest must be determined. If the capital funding by Government is written off, the question arise how will Sentech be sustainable in the long term and how will the funding for the replacement of obsolete equipment be done.
- (d) In deriving signal distribution charges from costs of provision, it is assumed that historical cost information must be considered. The question then is whether there was adequate maintenance and repair work done in the period for which costs will be looked at. Inadequate maintenance and repair work will shorten the life of equipment and will result in earlier replacement and below standard QoS. The life time of high power transmitting equipment should be at least 15 years and provides the basis for the capital/establishment cost depreciation to be included in the pricing. Shorter depreciation periods will have a significant upwards impact on pricing.
- (e) The new digital transmission equipment will have a different operational cost profile with possible new elements such as send-away repairs for high technology modules, software licensing fees, software updating, hardware updating, etc. Adjustments will have to be made for these aspects and of course for any costs on analogue transmissions that do not apply to digital.
- (f) The question is also whether Sentech will have adequate technological expertise and capacity on the digital transmission installations when the migration is complete. If they do not they may have to outsource repair work to external and possibly foreign resources that will be much more expensive and drive up pricing.

## **7.2. Question 33**

*Do you agree with the 'light touch' approach that the Authority proposes relating to cost orientation?*

- (a) The light touch approach is agreed with. Tariff reviews should be done annually.
- (b) A heavy touch would require additional external expertise and capacity that is familiar with the broadcasting signal distribution domain to produce an effective result. It is unlikely that the required expertise will be available locally.

### **7.3. Question 34**

*Do you believe that a Regulatory Accounting obligation would be proportionate to the harm that the remedy seeks to address?*

Regulatory accounting is expensive, cumbersome and very complex. This was done by ICASA for Telkom during their exclusivity period. The success or failure of that process could be investigated. Personal opinion is that it was not proportionate.

### **7.4. Question 35**

*Should existing agreements be considered for amendment with respect to price? Please provide justification in support of your view?*

The answer to this question is the same as that to Question 31 in that the any amendments necessary due to regulations should be carried out by the SMP Operators and their clients but should not involve ICASA. What could be done is for ICASA to look at tariff increases over the last 10 years and to compare it with the annual CPI rate increase. Before 2000, the annual tariff increase rate was kept within the annual CPI rate increase.