GENERAL NOTICES

NOTICE 346 OF 2011

INDEPENDENT COMMUNICATIONS AUTHORITY OF SOUTH AFRICA

ICASA REGULATORY FRAMEWORK FOR BROADCASTING TRANSMISSION SERVICES

DISCUSSION PAPER FOR COMMENT

1. The Independent Communications Authority of South Africa (herein after referred to as "the Authority") hereby gives notice of the Electronic Communications Act No. 36 of 2005 (herein after referred to as "the Act") ....

2. The purpose of this Discussion Document is to outline the Authority's initial views on a number of aspects of the broadcasting transmission market in South Africa. The Authority accordingly seeks the views of interested stakeholders on these issues.

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APPROVED BY

DR STEPHEN MNCUBE
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DATE 30/05/2011

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ICASA REGULATORY FRAMEWORK FOR BROADCASTING TRANSMISSION SERVICES

DISCUSSION DOCUMENT FOR COMMENT

JUNE 2011

1. The Authority invites written submissions on issues and questions raised in the discussion document from all interested parties and stakeholders. The closing date for submissions is **13 September 2011** by no later than 16h00, by post, hand delivery, facsimile transmission or email for the attention of and directed to:

   Lufuno Sigwavhulimu
   Independent Communications Authority of South Africa
   Private Bag X10002
   Sandton
   2146

2. Delivery address: Block A, Pinmill Farm, 164 Katherine Street, Sandton. Where possible written representations should also be e-mailed to: lsigwavhulimu@icasa.org.zaand copypcokie@icasa.org.za

   Enquiries can be directed to the Project Leader on:
   Landline: 011 566 3683
   Fax: 011 566 3684

3. All written representations submitted to the Authority pursuant to this notice will be made available for inspection by interested persons at the Authority's library and copies of such representations will be obtainable on the payment of the prescribed fee.Stakeholders are kindly advised to indicate any objection to the release of information contained in a submission, which is considered as confidential. Motivations in this regard shall include reason(s) for such information not to be made public. The Authority will take into account all such objections when responding to requests for copies and information on submissions to this document.

4. Persons submitting written representations are further invited to indicate, as part of their submissions, whether they require an opportunity to make oral representations and the estimated duration thereof, which duration shall not exceed one hour.

5. The Authority will review and analyse all submissions received from stakeholders in response to this discussion document. Findings emanating from this consultation exercise will form a foundation in the development of the framework for the regulation of Broadcasting Transmission Services.

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1. EXECUTIVE SUMMARY

The purpose of this Discussion Document is to seek information from interested stakeholders on a number of aspects of the wholesale broadcasting transmission market in South Africa. This is a Discussion Document, and does not reflect the Authority's final views. In particular, the Authority is interested in gaining a comprehensive understanding of the current structure and the level of competition in the market.

This Discussion Document sets out the Authority's initial views on the market definition, operator(s) that may have Significant Market Power (SMP) in these markets, and possible pro-competitive measures that might be applied in these markets where competition may be found to be ineffective.

The Authority accordingly provides stakeholders with its preliminary views on a range of matters and seeks the views of industry on these issues.

The key areas to be covered in this document include:

- A description of the Wholesale Broadcasting Transmission Services market in South Africa (including likely future technological and commercial developments);
- Initial views for discussion on Market Definition issues in terms of Section 67 of the Electronic Communications Act No. 36 of 2005 ("ECA");
- Initial views for discussion on an assessment of the competitive conditions on the defined markets;
- Initial views for discussion on Identification of licensees with Significant Market Power (SMP) in the defined markets and/or market segments; and
- Initial views for discussion on possible pro-competitive remedies that could be imposed on licensees found to have SMP to remedy any identified market failures.

The Authority puts forward a range of questions in this Discussion Document in order to obtain a better understanding of the markets discussed and welcomes feedback from the industry regarding the Authority's preliminary observations.

The product markets that have been initially identified in this document are:

- The provision of managed transmission services (MTS) for satellite broadcasting;
- The provision of managed transmission services for the purpose of providing analogue (and digital, when available) terrestrial broadcasting transmission services within South Africa to deliver television broadcasting services;

- The provision of MTS for the purpose of providing terrestrial broadcasting transmission services within South Africa to deliver radio broadcasting services at a regional level;
- The provision of MTS for the purpose of providing terrestrial broadcasting transmission services within South Africa to deliver radio broadcasting services at a location other than at a regional level.

After consideration of the relevant factors discussed in this document, the Authority's preliminary view is that the following markets may not be effectively competitive:

- The market for MTS for the terrestrial television broadcasting market (analogue and digital);
- The market for MTS for radio broadcasting in areas that are national or regional in scope (non-local terrestrial);
- The market for MTS for radio broadcasting in small geographic areas (local terrestrial).

In addition, the Authority has come to a preliminary view that Sentechmay have Significant Market Power (SMP) in each of the above wholesale broadcasting transmission markets where competition is ineffective.

There are a range of pro-competitive remedies available to address the potential impact of SMP in a market. The ECA provides a non-exhaustive list of remedies or pro-competitive terms and conditions that may be imposed; including:

- timely compliance with license terms and pro-competitive conditions.
- to act fairly and reasonably in relation to provisioning of services, facilities leasing and access;
- transparency through obligations to publish terms and conditions;
- non-discrimination;
- accounting separation, and compliance to prescribed accounting methods; and
- price controls, such as cost orientation.

The Authority must, in terms of the ECA, consider all of the potential remedies and decide which are the most appropriate to impose, if any, based on an assessment of the markets. This Discussion Document, therefore, also puts forward a preliminary view of potential remedies that may be appropriate to be imposed in those wholesale broadcasting transmission markets where competition may be found to be ineffective.

2. BACKGROUND AND LEGAL FRAMEWORK

2.1 Background

The Authority published a notice in, Government Gazette No. 33599 of 30 September 2010, of its intention to embark on a section 4B inquiry on wholesale transmission services in terms of the Independent Communications Authority of South Africa Act, Act 13 of 2000 ("the ICASA Act".)

Following the Notice the Authority published a questionnaire on its website on 6 October 2010 and as an additional measure circulated the Questionnaire directly to licensees, to the extent possible. In addition information gathering meetings were held with representatives of the industry including broadcasters, signal distributors and industry associations. The objective of the questionnaire was to enhance the Authority's knowledge about the broadcasting transmission markets. The information assisted the Authority in preparing preliminary definitions of the market by:

- identifying the products and services provided;
- the suppliers and customers in the market;
- the geographic market;
- market size and share of the market; and
- providing insight into challenges experienced in the market.

One of the outcomes of this process could be a decision by the Authority to pursue a formal market review in terms of Chapter 10 of the ECA. Section 67(4) of the ECA (Chapter 10) allows the Authority to prescribe regulations defining the relevant markets and market segments, as applicable, where pro-competitive conditions may be imposed upon licensees having significant market power, if the Authority determines such markets or market segments have ineffective competition[1]. Prior to potentially embarking on a section 67(4) process, the Authority has made a decision as a first step to conduct an inquiry to allow all interested parties to provide information to the Authority on all matters that it is required to consider.

It is in terms of this process that this Discussion Document is published. Respondents have 60 days[2]from the date of publication of this Discussion Paper to provide written

[1] Section 67(4)(a) of the Electronic Communications Act, 2005 (Act No. 36 of 2005)

[2]Working days

submissions to the Authority and make an indication whether a respondent wishes to make an oral presentation during public hearings.

Table 1 provides a summary of the responses from industry.

Table 1: Industry Responses to the Authority Questionnaire

	Television		Radio			Signal Distributors	Other	Total
	Commercial/ Public	Community	Commercial	Community	Public			
Total No of Licensees	5	7	16	171	18	3	n/a	220
No of Responses	5	0	0	14	18	3	2	42
Total % from licensees	100%	0%	0%	8.19%	100 %	100%	-	19%

The Authority notes that the response from industry to the questionnaire was lower than anticipated. In addition, some of the responses that were received were incomplete. Further information is still required from industry in order for the Authority to fully define the market, assess the level of competition and (if needed) propose pro-competitive remedies.

2.2 Relevant Legislation and Regulations

Broadcasting legislation and policies in South Africa are aimed at providing all South Africans with access to broadcasting services and a diverse range of information, education and entertainment. The following is the main legislation regulating broadcasting:

- The Electronic Communications Act 36 of 2005
- The Broadcasting Act 4 of 1999 as amended
- The Sentech Act 63 of 1996

The ECA was promulgated in 2006. The ECA is aimed at promoting convergence between broadcasting and telecommunications and ensuring that the regulatory approach to both

sectors is similar. The Broadcasting Act (introduced in 1999) sets out specific requirements for broadcasting – including particular stipulations for the public broadcaster. Many of the provisions in the Broadcasting Act were moved to the ECA. The Broadcasting Act provides for a three tier broadcasting system for sound or television classified as – public, commercial and community – and further categorised as free-to-air, terrestrial subscription, satellite subscription, cable subscription, low power sound broadcasting service and any other class of licence prescribed by the Authority from time to time[3]. The Broadcasting Act gives effect to the fundamental constitutional principles with respect to freedom of expression and the journalistic, creative and programming independence of the broadcasters and independence of regulation of broadcasting as guaranteed by the Constitution. In addition, the Broadcasting Act provides for the establishment of the South African Broadcasting Corporation Limited as a public company (SABC Ltd) with the state as the sole shareholder.

In 1996, all units of the SABC dealing with signal distribution were incorporated into a new public company – Sentech (Ltd). The Sentech Act (No 63 of 1996) was promulgated and the company was licensed in terms of the then Independent Broadcasting Authority Act (IBA Act) as a "common carrier" signal distributor. Sentech was given all existing signal distribution equipment and granted exclusivity over transmitter high sites critical for effective transmission. In exchange the signal distributor was obligated to provide equitable signal distribution upon request. The IBA Act was repealed in its entirety by the ECA. As such, Sentech no longer has exclusivity over transmission high sites[4].

Following on the discussion of market developments, this section explores the relevant provisions contained in the ECA that may have an impact on the broadcasting industry. In particular the impact of the Facilities Leasing Regulations, "common carrier status", "must carry obligations" and the provisions of Chapter 10 will be discussed. Related to these regulations is the Digital Switchover process, which will be discussed in a separate section hereunder.

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3 Section 5 of the Broadcasting Act 4 of 1999

4 Section 5(a) of the Sentech Act 63 of 1996 stipulated that the main object and the main business of Sentech shall be to provide, as a common carrier, broadcasting signal distribution for broadcasting licensees in accordance with the provisions of the IBA Act. However, section 93(8) of the ECA stipulates that any monopoly or exclusive rights existing by virtue of the related legislation, the IBA Act, the Sentech Act or the Telecommunications Act is null and void. The ECA further amended the Sentech Act with the substitution of section 5 to the effect that "the main object and business of the Company shall be to provide electronic communications services and electronic communications network services in accordance with the ECA", thus effectively repealing the "common carrier" status of Sentech.

The ECA created a technologically neutral environment wherein no licensee is restricted in terms of the types of services it is entitled to provide. The only restrictions would be due to the type of Electronic Communications Network Service (ECNS) or Electronic Communications Service (ECS) licence which could either be class or individual. This means that with the appropriate licence, any licensee could provide broadcasting transmission services, should it wish to do so.

The ECA introduced a new licensing regime applicable to both broadcasting and electronic communications services (telecommunications services). In terms of this regime, there are two categories of licence:

- individual licences (which in relation to broadcasting apply to public and commercial broadcasting services and are granted for a maximum of 20 years, with the actual term to be determined by ICASA; and
- class licences (which apply to community and low power stations are granted for a maximum of 10 years)[5].

The Standard Licence Terms and Conditions Regulations determined the licence terms to be 15 years for public and commercial free-to-air television and subscription services, 10 years for public and commercial radio stations and 5 years for community and low power stations.

An important consideration for broadcasting transmission services are the facilities leasing provisions contained in the ECA. The Authority issued Facilities Leasing Regulations in terms of section 44 of ECA. The Authority is of the view that broadcasting transmission services are facilities as contemplated in the ECA. Section 43 of ECA is therefore applicable to broadcasting transmission services and provides that ECNS licensees must, on request, lease electronic communications facilities, to any other person licensed in term of this Act, if it is technically and financially feasible.

The Must Carry Regulations[6] requires all subscription broadcasters to carry public broadcasting services. The intention of these requirements is to extend the reach of public broadcasting services. Accordingly, public broadcasting services are carried via terrestrial and satellite networks. The Must Carry Regulations oblige a subscription broadcasting service (SBS) to carry the television programmes broadcast by a public broadcasting service (PBS) licensee. The purpose of the must carry regulations is amongst others, to

[5] Section 5 of ECA

[6] Gazette No. 31500 dated 10 October 2008

provide for the terms and conditions under which the SBS licensee will carry the programmes of the PBS licensee. In terms of the current regulations, all television programmes comprising a channel and broadcast by a PBS licensee as part of its broadcasting service are subject to must carry obligations. The regulations stipulate that the SBS licensee must bear the costs of carriage of the television programmes of the PBS licensee on its distribution platform in compliance with the regulations. The PBS licensee must offer its television programmes, at no cost, to a SBS licensee upon request from the SBS licensee, and must deliver the signal in an un-encoded and compatible format. The PBS licensee bears the costs of transmission of the broadcast signal to the SBS licensee, and the SBS licensee is required to transmit simultaneously and without any alteration, the entire television programmes of the PBS licensee.

Chapter 10 of the ECA provides the Authority with an *ex-ante* regulatory process to review and, if required, introduce pro-competitive remedies to address problems in defined markets where competition is ineffective and licensees have been identified as having Significant Market Power.

3. BROADCASTING TRANSMISSION SERVICES MARKET IN SOUTH AFRICA

3.1 Introduction

In this section the Broadcasting Transmission Services Market will be discussed broadly and the terminology for the market analysis explained. Throughout the document broadcasting transmission services will be used as a general term to describe the following services:

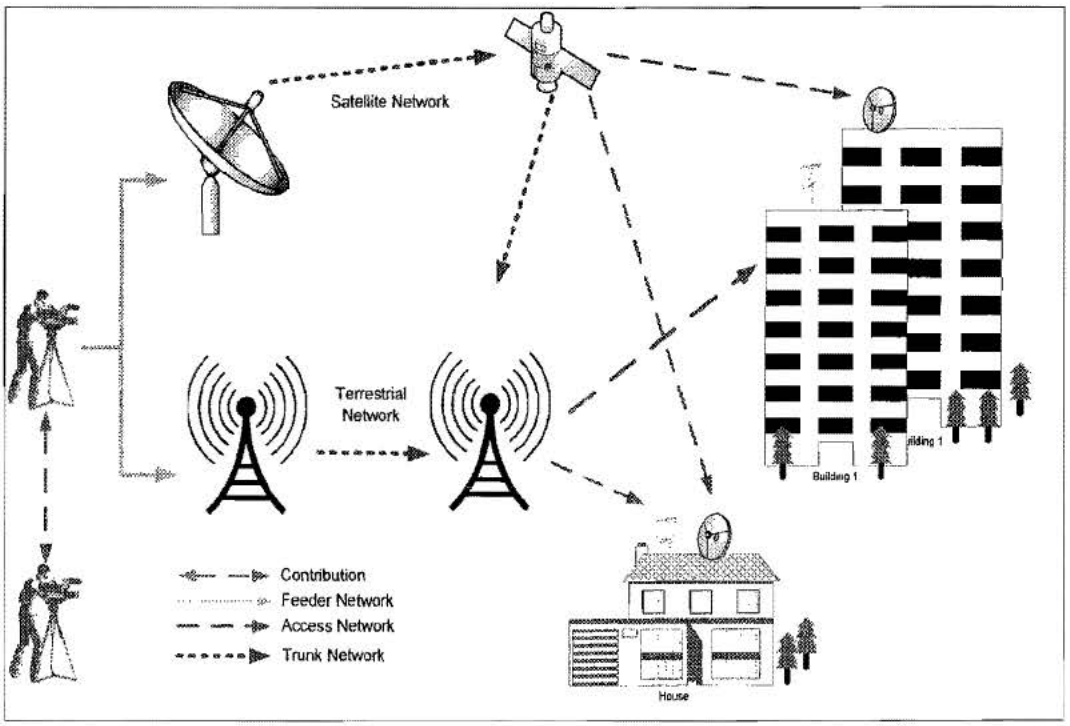
- UHF and VHF television transmission (SABC 1, 2, and 3, e.tv, M-Net, community TV etc.);
- FM Radio transmission (SABC national, regional, commercial and community radio);
- AM Radio transmission;
- SW Radio transmission;
- Satellite TV (DSTV, TopTV etc.) transmission;
- Digital Terrestrial Television (DTT) transmission; and
- Digital Audio Broadcasting (DAB).

Broadcasting transmission services can generally be divided into four main types:

- Transmission between production sites (contribution);
- Transmission for feeding signals to transmitter station(s);
- Transmission for relaying signals between main transmitters (on cable TV networks from the head end to local node); and
- Transmission for distribution to end users (access network).

The actual infrastructure of the broadcasting networks is presented in **Figure 1**.

Figure 1: Schematic presentation of the infrastructure for Broadcasting Transmission in South Africa



The contribution network is the part of the network where broadcast content is carried e.g. between recording/production sites and studio.

The feeder network is the portion of the network that runs from the broadcaster out to the first point of connection in a transmitter network or trunk network (terrestrial antenna or satellite earth station). Feeder networks can be developed using various technologies such as fibre or radio relay links.

The trunk network is the portion of the network where broadcast signals are carried between the first point of connection with the broadcaster up to the interface with the access network.

The access network is the last portion of the network and is used to distribute broadcast signals to the end user. In a broadcasting context such networks are usually called signal distribution networks. In South Africa, broadcasting content can be distributed either using the terrestrial network or by satellite. Technological developments have meant that other technologies may increasingly be used for broadcasting in the future. On the feeder, trunk and contribution networks, the Authority understands that the infrastructure used to deliver broadcasting transmission services can be used both for transmission of broadcasting services and for telecommunications.

The Authority understands that there are a range of providers in the market currently providing broadcasting transmission conveyance (i.e. point to point transmission services on feeder, trunk and contribution networks). These include Sentech, Telkom, Neotel, Globecast, Telcordia. It is the Authority's initial view that any consideration of these services in terms of market definition would need to consider the broader range of providers that provide similar types of transmission services in the telecommunications market. In many other countries, these 'leased line' transmission services (which can be provided at both the retail and wholesale level) have been considered as part of a broader market (including both transmission services used by broadcasters and fixed and mobile telecommunication service providers). The Authority considers that it is beyond the scope of this review to consider the market for leased lines. This market may be subject to a separate market review by the Authority in terms of section 4B of the ICASA Act and/or as part of future Chapter 10 inquiry under the ECA.

As discussed in the introductory section, the focus of this review is on broadcasting transmission services, which the Authority defines as the transmission of content to end-users once the content has been delivered to the Access or Signal Distribution network[7]. For terrestrial networks the access network begins at the transmission site or mast. For satellite networks, the Authority considers that the access network begins from the satellite ground station. The different types of broadcasting transmission will be discussed in greater detail below.

[7] The conveyance of broadcasting content from the production studio to the access network can sometimes be arranged by the supplier of broadcasting transmission as part of an end-to-end managed transmission service to broadcasters. However, this conveyance is not considered in detail in this review.

Transmission equipment is used as a generic term to describe all of the equipment (other than masts) which is used by signal distributors to transmit the broadcast signal (i.e. transmitter, combining unit, feeder and antenna) received via the signal distribution network.

As explained above, the conveyance of broadcasting content from studios to transmission masts (i.e. "point-to-point" transmission or "linking") forms part of broadcasting transmission. This "conveyance" service will be discussed briefly in this Discussion Paper but it is not intended to be a key focus of the review.

3.2 Market Developments

Due to the introduction of the ECA and related regulations, different market opportunities and considerations arise for broadcasters. In this section the impact of issues such as the regulatory regime and new technologies (including IPTV, Mobile TV and Cable TV) will be discussed. Importantly, the basic principles of competition regulation will be introduced.

The Authority in its position paper on IPTV and VOD services[8]has chosen to differentiate between Internet TV and IPTV, namely, that Internet TV is an unmanaged service using the same publishing model that exists on the public Internet and can be accessed globally in the same way and fashion as any other website. In contrast, IPTV is the making available of video and television-type content through secure and protected Internet Protocol (IP) telecommunications networks.

The term VOD refers to a number of technologies offered over private networks and the Internet, all of which allow the selection and rental or download to own, in a virtual or electronic form of video content for immediate or later viewing on a range of devices such as computers, television sets, portable players and mobile phones. There are a broad range of business models for VOD such as the traditional rental model or free VOD (FVOD) financed by advertising, but the most common model is subscription VOD (SVOD).

The Authority sought to clarify the manner in which IPTV and Video on Demand (VOD) services are to be treated in the context of the regulatory framework established by the ECA and the types of licences which will be required to provide such services. IPTV services have been determined to be broadcasting services for the purposes of the ECA

[8]Position Paper in relation to Internet Protocol Television (IPTV) and Video-on-Demand (VOD) services. Gazette33436.

and as such a broadcasting service licence is required to provide this service. In contrast, VOD services (not including on-demand services provided over the public internet) have been determined to be ECS for the purposes of the ECA and as such an ECS licence is required.

The Authority furthermore published Mobile Television Regulations[9] on 16 April 2010 wherein the Authority set out the regulatory framework for licensing of radio frequency spectrum for the provision of mobile television. Accordingly, two Mobile TV broadcast frequency licenses were issued to provide mobile broadcasting services using the Digital Video Broadcasting Handheld (DVB-H) standard. On September 10, 2010 ICASA announced that it had awarded e.tv 40% of the capacity on multiplex 1, and the remaining 60% of the multiplex being awarded to MultiChoice. In late November 2010, both e.tv and DStv launched mobile TV services.

3.3 Digital Switchover and the re-negotiation of wholesale broadcasting transmission agreements

The migration from analogue to digital broadcasting will have far reaching implications on the broadcasting industry. In preparation for the migration to digital broadcasting, the industry has already commenced technical trials and pilots.

In 2006 South Africa signed the ITU RRC'06 Agreement, confirming its decision to use Digital Video Broadcasting Terrestrial (DVB-T) as its national digital terrestrial television standard. The government published a Policy Determination on Digital Migration[10] providing amongst others, the following:

- that there would be a 3 year period of dual illumination commencing on 1 November 2008 (when the digital signal will be switched on) and ending on 1 November 2011 (when the analogue broadcast signal will be switched off);
- national broadcasting signal coverage should be achieved in a phased manner so as to reach 50% by 2008, 80% by 2010 and close to 100% by 2011, and areas that are difficult to reach should be covered by satellite;
- during dual illumination, two multiplexes should be reserved for incumbent broadcasters;

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[9] Gazette 33125,16 April 2010.

[10] Broadcasting Digital Migration Policy for South Africa August 2008 Gazette 31408

- approximately eight standard definition digital channels will be created per radio frequency spectrum currently assigned to one analogue channel;
- DVB-T is the national standard for broadcasting digital terrestrial television (DTT) in South Africa, DVB-S is the national standard for broadcasting digital satellite television in South Africa and MPEG-4 is the compression standard for the DTT rollout in South Africa. The South African Bureau of Standards has already published DVB-T and DVB-S as the South African standards respectively[11];
- Set-top-boxes (STBs) to be used to receive DTT services will have standardised operating systems prioritising security features, interoperability and inter-connectivity;
- A body known as the Digital Dzonga was to be established comprising representatives from the public, government, industry, organised labour and consumer groups and aimed at consumer education and awareness, stakeholder liaison including the Authority and STB manufacturers, and monitoring.

The Authority published Digital Migration regulations[12]on 15 February 2010 prescribing the dual illumination period to run from 1 November 2008 to 30 April 2011. The Authority also introduced a definite performance period during which the industry shall commence the rollout of public DTT services to commence from 1 April 2010 to 30 March 2012. However, with regard to the commencement of the dual illumination period, the Authority noted the delays that have been experienced by the Department of Communications which is driving the STB manufacturing and distribution process. Consequently, the Authority decided that the performance period during which broadcasters are required to dual illuminate will now commence on a date to be set by the Authority by notice in the Government Gazette for a period of 36 months after commencement date. Recently, on 14 January 2011, Communications Minister Padayachie made an announcement[13] that served to extend the switch off date to November 2013 and also changed the standard to DVB-T2.

The multi-channel environment, for which digital broadcasting allows, has raised questions regarding the appropriate role to be played by the entities which provide signal distribution services to the broadcasters. It is likely in the future, to become difficult to allow broadcasting service licensees operating on the DTT platform to enter into their own commercial arrangements with ECNS licensees who provide signal distribution services. This is because a single multiplex, which must be transmitted by a single provider of signal

[11] https://www.sabs.co.za/webstore/standards/product.php?id=14016150

[12] Gazette 32956, 15 February 2010

[13] Statement by Minister of Communications Mr R L. Padayachie on progress made with regards to the Digital Migration process. Available at http://www.doc.gov.za

distribution services, may be allocated to two or more different broadcasting service licensees.

The Authority has been informed in some responses to the Questionnaire that licensees are currently re-negotiating Master Signal Distribution Agreements with the view of migrating to digital broadcasting.

3.4 Relevant Licensees

A broadcaster wishing to deliver broadcast content to end users in South Africa may obtain such transmission services from a limited number of providers and across a limited number of technology platforms. The choice of provider is based on a number of factors, including:

- Coverage and penetration;
- Technical aspects, including the degree of digitisation and quality of service;
- Capacity availability and limitations;
- Regulatory requirements and restrictions; and
- Cost differentials and revenue impact of acquiring transmission over different platforms.

In South Africa there are two major technology platforms for the delivery of broadcasting content; namely terrestrial (analogue and digital) and satellite.[14] Subscription broadcasters are obliged under certain circumstances to carry PBS channels at no cost to the PBS licensee[15] in terms of the Must Carry regulations.

In addition, licence obligations such as the requirement to broadcast to a certain specific proportion of the population may have the effect of forcing broadcasters to use a particular technology platform to broadcast content to end-users (i.e. viewers and listeners).

In the absence of "Must Carry" regulations, the broadcaster itself may decide whether the programmes are to be transmitted over an additional platform. This decision is based on the greater number of end users it wants to reach within its licensed area compared with the costs/revenues involved in reaching these extra viewers and/or listeners.

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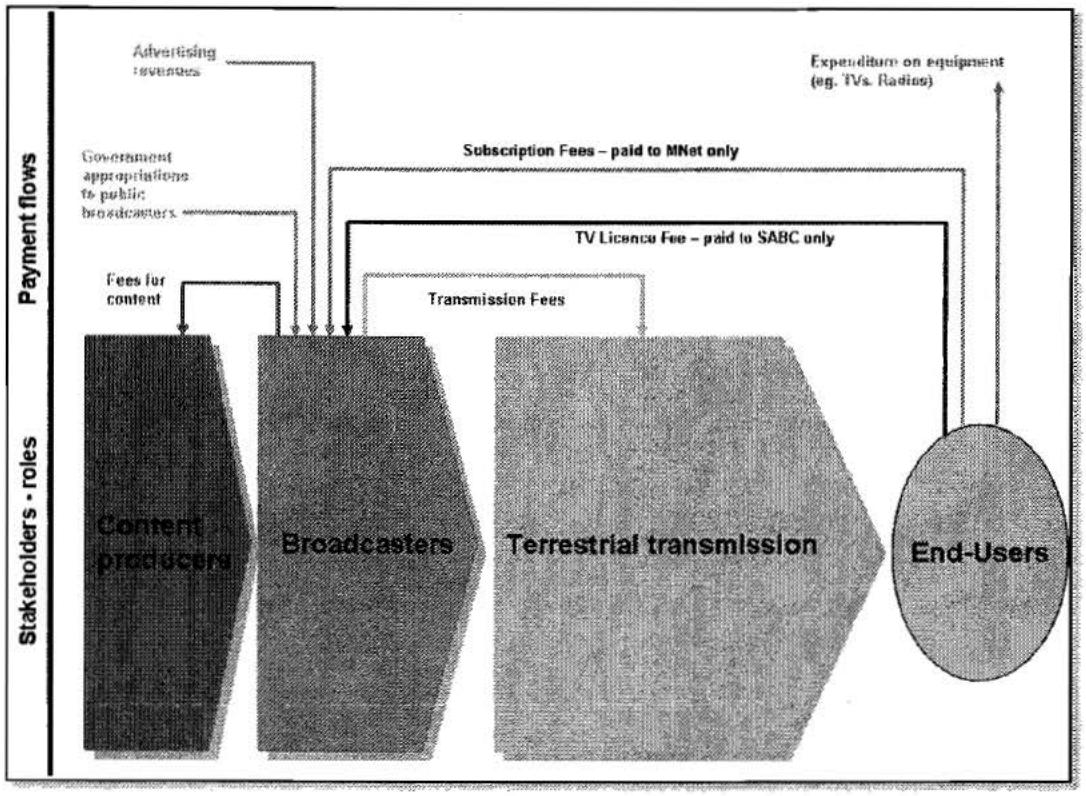
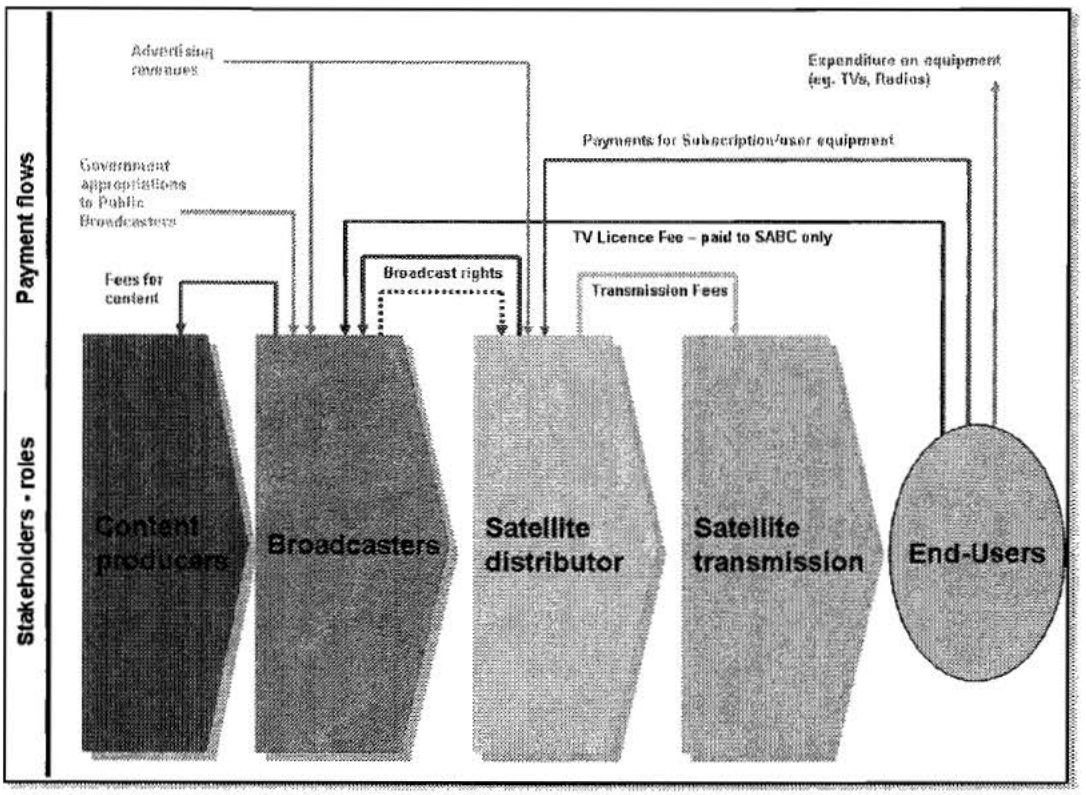
[14] Other technology platforms such as using broadband or mobile networks to deliver broadcast content to end-users is not considered sufficiently developed in South African at the present time. These emerging technology platforms are discussed in more detail later in the Discussion Paper.

[15] Gazette 31500, October 2008. Must carry obligations are discussed in more detail later in the Discussion Paper.

Figure 2: Schematic presentation of the value chain and payment flows for Broadcasting Transmission in South Africa (Terrestrial and Satellite Broadcasting





The broadcasting market consists of the following main categories of operator:

- **Content producers**, such as movie studios and television and radio production companies;
- **Broadcasters** (including SABC, MultiChoice and e.tv);
- **Providers of transmission capacity** (owners of infrastructure, e.g. satellite broadcast distributors such as Orbicom, owners of satellite transponder capacity, such as Intelsat, SES ASTRA, Eutelsat, and Sentech as the owner of the terrestrial transmission network);
- **Distributors** (companies that distribute broadcast programming by subscription agreements out to viewers, such as TopTV on satellite networks); and
- **End users** (viewers and listeners).

The relationship among the various operators can be briefly explained as follows: Broadcasters' programming consists of content produced in-house as well as content purchased from other content producers. To get content distributed out to end users, broadcasters have to contract directly with providers of broadcasting transmission services (e.g. Sentech) or with a distributor of broadcast content (such as DSTV or Top TV). The responses from industry as part of the questionnaire circulated as part of this inquiry indicated that Master Signal Distribution Agreements have been agreed between broadcasters and the providers of broadcasting transmission services.

Depending on the type of broadcaster, funding can come from TV licence fees, customer subscriptions, advertising or through direct government funding.

3.5 Types of Wholesale Broadcasting Transmission Networks

Today in South Africa the majority of end users receive radio and television via terrestrial networks or by satellite. The Authority notes that there is the potential for some end-users to access broadcasting content over alternative delivery platforms such as using broadband connections (such as streaming services) and using existing mobile networks. However, the Authority's view (which is discussed in more detail below) is that these alternative technology platforms are not sufficiently pervasive at the present time and are not considered in detail in this document.

There are an estimated 12.7 million households in South Africa[16]. The Authority estimates that approximately20% of the population currently are subscribers to satellite television services (in addition to any terrestrial service those households may take)[17]. The remaining 80%of the population are therefore currently reliant only on terrestrial broadcasting for their television service.

In order to deliver television or radio content to end-users (viewers and listeners), the content can be transported over a number of 'networks' including:

- Content delivery from one production site to another (contribution network)
- Delivery of content from the production studio to the first transmitter station (feeder network)
- Delivery of content between main transmitters (trunk network)
- Transmission for distribution to end users (access or 'Signal Distribution' network)

3.6 Wholesale Broadcasting transmission on Terrestrial networks

A key input required for radio and television broadcasting transmission is the network of antennae support structures ('masts') at specific locations ('sites'). Masts may be located on sites that have been purchased by the terrestrial network operator for broadcasting transmission services and are owned outright by them. Masts may also be installed on sites that are leased from a freeholder (such as a farmer) who receives revenue for allowing installation and access. Finally, masts (or small antennae structures) may be installed by the terrestrial network operator on infrastructure owned by other organisations such as fixed or mobile communication operators, rooftops of tall buildings or different types of structures that provide the required height.

In South Africa Sentech is the main provider of wholesale broadcasting transmission on terrestrial networks. The Authority understands that Orbicom has a network of terrestrial transmission sites but only provides transmission services to MNet andMultichoice(both Orbicom and MNet are wholly owned subsidiaries of MultiChoice). As such, the great majority of masts suitable for national television and radio broadcasting transmission are controlled by Sentech.

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[16]Population and Household Projection for South Africa 2001 – 2021 Research Report No. 364 Bureau of Market Research, UNISA (2007.8)

[17]This is based on MultiChoice data from its 2010 Annual Report that it had 2.85m households subscribing to its DSTV satellite service as of March 2010 (see page 30 of its annual report). The average household size in South African is 3.69 and total population is estimated at 49 million (taken from Population and Household Projection for South Africa 2001 – 2021 Research Report No. 364 Bureau of Market Research, UNISA (2007.8)). Based on this data, around 20% of the population has the necessary equipment to view satellite pay-TV broadcasting content.

The Authority notes that digital television broadcasting is being trialled as part of the migration process. Further, Digital Audio Broadcasting (DAB) is also being trialled. Thus two forms of terrestrial transmission are currently being used for the delivery of both radio and television broadcasting: analogue and digital. Both analogue and digital terrestrial transmission have similarities in respect to some of the inputs used (e.g. masts, maintenance) and may have common end-users (viewers and listeners). However, they differ in certain respects. The differences include the power of transmission level used, the transmission equipment used, capacity (digital transmission can carry significantly more content than analogue) and end-users. As digital television is rolled out nationally end-users that wish to view and listen to digital content would need to invest in new receiving equipment and may need aerial adjustments to receive digital signals.

Broadcasters are the immediate customers for terrestrial television transmission. As a condition of their broadcasting licence, some television broadcasters have national coverage requirements (e.g. SABC and MNet have licence obligations to provide national coverage for their broadcasting services while e.tv is required to cover a minimum of 77% of the population). The Authority estimates that around 20% of the population has adopted the necessary equipment (such as a satellite dish and decoder) to receive satellite broadcast signals[18]. With the remaining 80% of the population reliant on receiving television content over the terrestrial network, television broadcasters with licence obligations regarding population coverage have no alternative but to obtain broadcast transmission services over the terrestrial network.

The service that Sentech, as the only provider of a national terrestrial network, provides is termed a Managed Transmission Service (MTS) since it represents an end-to-end service including the installation and operation of the broadcasting equipment, the management of broadcast quality and maintenance of the equipment. Customers accordingly have a single entity to deal with for all transmission requirements.

There are also regulations in place in order to effectively manage broadcasting spectrum interference. This is likely to reduce the flexibility of broadcasters in changing to alternative suppliers of broadcasting transmission. In addition, where a television broadcaster has been transmitting from a particular location, all of their viewers will have their aerials pointed in that direction. Changing to an alternative supplier of broadcasting transmission

[18]See earlier discussion on the logic of this estimate.

in a different location is likely to be very disruptive for viewers who might have to adjust their antennae.

There are similar constraints on radio broadcasters for the following reasons:

- For particular frequencies used by radio broadcasters, only particular masts or sites may be suitable;
- In order to service large and profitable audiences, broadcasters may be constrained to use sites that can provide them such coverage;
- The lack of alternative sites at particular locations means that only existing sites can be used and there are planning and cost barriers to entry that make erecting a new mast difficult,if not impossible;
- Due to the spectrum availability, broadcasters may have limited options available to expand their usage of sites (as such use may interfere with adjacent broadcasts); and
- Transmission of certain frequencies from specific sites will have been cleared internationally for use, and the use of a new site may mean repeating the process, which will have time and cost implications.

Digitisation provides a substantial increase in transmission capacity in the physical infrastructure. It is expected that in a few years the entire value chain in the television market, except for the television sets, will be completely digitised. Once Digital Switchover has been implemented, the analogue network is intended to be switched off.

With regard to television, SABC, MNet and e.tv have nearly national distribution via terrestrial networks alone. Sentech has indicated in its latest Annual Report that it has infrastructure and systems that enable it to provide coverage to 92% of the South African population which it estimates at 48 million people[19].

End users receive signals from analogue terrestrial networks via an ordinary roof/indoor aerial. There are no costs directly connected with receiving such signals aside from the television licence fee.

[19]Sentech (2010), *Annual Report*, page 4.

3.6.1 The value chain for terrestrial broadcasting transmission

The retail market of broadcasting is comprised of end-users (views and listeners). The wholesale market is comprised of suppliers and consumers of MTS. This applies for both radio and TV, though in some cases, radio broadcasters self-provide broadcasting transmission as an alternative to purchasing MTS from the owner of the terrestrial broadcasting network (i.e. Sentech).

For terrestrial broadcasting, the MTS supplier takes responsibility for a broadcast stream arriving at a transmission site and makes arrangements necessary for it to be transmitted from an antenna at that site, monitoring and assuring quality of the transmitted signal and making arrangements for the maintenance of the transmission equipment. The MTS supplier also operates the transmission site, which involves the provision of space to establish a building, or maintenance of buildings, facilitation of power etc. Broadcasting transmission is often effected using equipment, in particular a combiner, feeder and a shared antenna which is shared between several analogue broadcast channels or digital multiplexes, in the case of digital broadcasting. The MTS provider is responsible for the installation, operation and maintenance of such equipment.

For satellite broadcasting, the MTS supplier takes responsibility for a broadcast stream when it reaches the access network (the satellite ground station), which is then transmitted to satellites and distributed to end-users that have the necessary equipment to receive such signals.

Sentech indicated in its response to the Questionnaire that it provided a MTS to all national radio and TV broadcasters as well as significant number of community radio and regional TV and radio broadcasters.

In its latest annual report, Sentech states that it has 7 customers of MTS for terrestrial television broadcasting (SABC, e.tv, MultiChoice, Soweto TV, Bay TV, Cape TV and Trinity Broadcasting). Sentech states that all these customers cover approximately 92% of the population. Sentech also operates a Satellite broadcasting network (Vivid) and has 11 customers transmitting on this platform (SABC, God TV, ASTV, France 24, Christian TV, Hope TV, Love World, WRS, Maranatha, Kruiskyk and Ezekeil TV). Sentech states that it provides MTS to all 21 SABC public radio broadcasters and TV broadcasters/stations. It provides MTS to 17 commercial radio broadcasters and 59 community radio broadcasters.

Some community radio broadcasters self-provide all or some of their transmission requirements. Other broadcasters purchase elements of their transmission requirements from suppliers other than Sentech. For instance, TopTV indicated that it purchases leased lines from Telkom and Globecast. The Authority is not aware of any regional or national broadcasters (radio and TV) who self-provide their broadcasting transmission services on a terrestrial network.

A review of the services actually purchased by broadcasters (as outlined in the responses to the Industry Questionnaire) as well as face-to-face discussions with broadcasters and signal distributors conducted as part of this review has confirmed that MTS is the main product supplied by Sentech to radio and television broadcasters seeking access to the terrestrial network. In discussions with Sentech and with other industry stakeholders, it was indicated that broadcasters were discouraged from seeking to 'unbundle' the MTS service and only purchase a sub-set of the services offered by Sentech.

Although in principle, many of the elements of a MTS may be obtained separately, the Authority understands that, in practice, all television broadcasters and most radio broadcasters in South Africa purchase a MTS from Sentech.

3.6.2 The wholesale broadcasting transmission needs of different types of broadcasters

Broadcasting transmission requirements may differ according to geographical area of the licence, the audience size and the terrain. The larger the geographic area, the bigger the audience and the more undulating the terrain the more likely are broadcasters to require transmission from tall purpose-built transmission masts. This is due to the need to propagate the broadcast signal over a wide area or because of a signal transmitted from a low vantage point would be poor in an urban environment. They are also likely to need high power transmissions in order to reach their target audience. This requires a specialised workforce to handle this equipment and power levels. These broadcasters may also need to broadcast from more than one location (for a national licensee, this may require a large network of sites). To provide this transmission and its ongoing maintenance, a broadcaster may prefer to contract with one firm, for both convenience and for consistency of quality. These broadcasters may also have greater start-up and ongoing costs when compared to smaller broadcasters. The basic equipment is likely to be expensive and sophisticated, its installation may be more specialised, the power needs are higher and the equipment itself may need more frequent replacement and maintenance due to the stress of high power use.

3.6.3 The type of sites used by different types of broadcasters

Broadcasters who have a larger geographic footprint are likely to require purpose-built transmission sites compared to those licensees with smaller geographic footprints, which may be able to install transmission equipment on sites that are not necessarily purpose built to provide broadcasting transmission services.

3.7 Broadcasting Transmission on Satellite Networks

Satellite broadcasting transmission commences at a transmitting antenna located at an uplink facility or ground station which may not necessarily be located in the same country as the audience for the broadcast. Uplink satellite dishes are very large, as much as 9 to 12 meters in diameter, to provide aiming accuracy and increased signal strength at the satellite. The uplink dish is targeted at a specific satellite and the up-linked signals are transmitted within a specific frequency rangeto the appropriately tuned transponder aboard that satellite. The transponder 'retransmits' the signals back across the satellite's 'footprint' (downlink) but at a different frequency band (a process known as translation, used to avoid interference with the uplink signal), typically in the C-band (4–8 GHz) or Ku-band (12–18 GHz) or both.

The down linked satellite signal, is typically collected by satellite dishes on each of the end-user's premises, which collect the relatively weak signal andconducts it to a low-noise block down converter or LNB. The LNB amplifies the relatively weak signals, filters the block of frequencies in which the satellite TV signals are transmitted, and converts the block of frequencies to a lower frequency range.The satellite receiver or Set-top boxcoupled to the end-user's television demodulates and converts the signals to the desired form (outputs for television, audio, data, etc.). Sometimes, the receiver includes the capability to decrypt the received signal; the receiver is then termed an integrated receiver/decoder or IRD.

The following licensees offer managed transmission services for broadcasting via satellite in South Africa; Sentech (on the Vivid platform), Orbicom and ODM. Satellite networks cover 100% of households in South Africa, though households require specialised equipment as well as a subscription to one of the satellite broadcasting distributors in order to receive satellite broadcasting content.

DSTV's digital broadcasting service is transmitted direct-to-home via satellite. MultiChoice (who owns DSTV) leases 8 KU-band transponders on the satellite, and its uplink facilities are provided by Orbicom (Pty) Limited and British Telecom. Customers receive these

signals on a satellite dish mounted on or near their homes. The signal is then descrambled and decompressed for viewing using a conditional access system, set-top box and smart card.

ODM self provides in terms of satellite 'direct to home' services using satellites owned by SES Astra (one of its shareholders). The company provides satellite up-link services from its satellite ground station in Germany. ODM leases point to point conveyance services from a range of suppliers (using fibre, dedicated leased lines as well as capacity on the underground sea cables) to deliver content from its studio in Johannesburg to its satellite distribution facilities in Europe.

3.8 Other broadcasting technologies

Broadcast content is, to some extent, also transmitted over other technologies. A brief assessment of alternative broadcasting technologies is provided below.

3.8.1 Fixed Network Technology/Xdsl

Further development and establishment of fixed network technology such as xDSL may represent a possible alternative to the existing technology platforms for broadcast content in the future. Such technology will only make possible fixed reception, i.e. no mobility or portability.

Web TV and IP TV exist, but in the Authority's view, the technology has not been adopted widely enough for such services to constitute an alternative for a significant number of end users within the time horizon of this analysis. The Authority's assessment is primarily based on the fact that live TV via the Internet is limited in scope driven by the low penetration of the internet at speeds necessary to support such services. Access and affordability issues still hamper the widespread availability of broadband internet services in South Africa. The Authority considers that IPTV and associated services will not be a realistic alternative distribution platform for broadcasting content until internet services at broadband speeds are available to a significant portion of population. This is unlikely to occur over the period of a market review (the next 2-3 years).

3.8.2 Mobile

Two forms of mobile TV have recently been launched in South Africa. One uses the data networks of existing mobile networks (3G) and allows the streaming of broadcast content.

The other is the introduction of a purpose built mobile TV network which sits alongside the existing mobile network and allows users to access a dedicated network for TV content. E.tv and DStv have both recently launched a dedicated mobile TV network (using spectrum allocated to them by the Authority). This service can be accessed on a DVB-H enabled mobile phone or via a Mobile TV decoder (of the DStv service). The DStv offering is a subscription service while the e.tv is offered at no charge to end-users.

The Authority considers that mobile TV could become a viable alternative to existing distribution platforms for content, especially given high mobile penetration in South Africa. However, until there is a significant take-up of the service, it is unclear whether mobile TV would be a credible substitute for existing distribution platforms or, more likely, a complement to existing broadcasting services.

3.8.3 Cable

Cable TV is still in its infancy in South Africa. The first licence was issued to Telkom Media in 2008. It applied for both a satellite and cable licence, which would allow it to broadcast a satellite service as well as provide an IPTV solution. The original licence had a generic statement in terms of format. However, Super5Media's licence (which was transferred from Telkom Media) stipulates the format. Super5Media wanted to have the format stipulated in its licence[20], while the other broadcasters were happy to have a "technology-neutral" stipulation. Super5Media is still to launch its services and has been granted extension by ICASA for the launch of its service due to delays in it being awarded its individual electronic communications network service (I-ECNS). The company has stated that it plans to offer television content over cable (copper and fibre) and to provide broadband Internet services.

In time, if cable is to be rolled out to cover a significant portion of the population, it could provide an alternative distribution platform for broadcasting content. In other countries, such as the USA and in Europe, cable represents a viable alternative to the existing terrestrial and satellite networks. With a viable cable network, the analysis of market power and the types of remedies considered to address such market power (if found) can be significantly different. However, cable networks are still to be built in South Africa and hence cannot be considered a viable alternative distribution platform for content in the short to medium term.

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[20]Statement made by the Director of Super5Media Tian du Pisanie, 2 February 2010 to the media.

3.9 Conclusion

As of today, the situation in the market for delivering television to end users in South Africa is such that a significant percentage of end users cannot choose other platforms for receiving television programming.

With the exception of xDSL over the fixed access network and perhaps Mobile, no alternative infrastructures will be able to provide geographic coverage sufficient to act as a substitute for the terrestrial and satellite networks currently used by broadcasters. Furthermore, on the supply side, for xDSL technologies to become more pervasive over the fixed access network in South Africa, the existing broadband networks will have to provide higher transmission capacity (bandwidth) than what is commercially available today, or compression technologies must become more advanced.

Eventually, broadcast content may be accessed by a significant number of end users using platforms other than terrestrial networks and satellite. At this point in time, however, there are no platforms that, within the time horizon of this analysis, will imply a real alternative for a significant number of end-users.

As a result, alternative technologies to deliver broadcast content (radio or TV) will not be considered relevant in the definition of markets or the assessment of competition in defined markets.

Questions for stakeholders from Chapter 3:

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.
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.
3. Has the Authority correctly characterised the broadcasting value chain in South Africa? If not, please provide additional information.
4. Has the Authority correctly characterised the potential competitive dynamics of alternative distribution platforms in South Africa?
5. How do the transmission requirements of broadcasters differ, depending on the geographic footprint of the licence?

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.

4. MARKET DEFINITION ISSUES

4.1 Introduction

The process of defining a market is not an end in itself. Markets are defined in order to assess whether competition is effective and whether any party has Significant Market Power (SMP) in a particular market or market segment. Following from an assessment of the effectiveness of the competition, it is then relevant to determine whether pro-competitive remedies are required to guard against the risk of anti-competitive behaviour by ECNS, BS or ECS operators who have SMP ("SMP Operators").

This section of the Discussion Document is concerned with reviewing the relevant functional product market and the geographical market for broadcasting transmission services in South Africa in order to define the market for broadcasting transmission services delivered to end-users in South Africa.

Based on its review of the market (including discussions with industry and the collation of responses to an Industry Questionnaire that was circulated to all licensees in October), the Authority's initial view is that broadcasting transmission services in South Africa comprises the following service:

• A Managed Transmission Services (MTS). A MTS provides a customer with a suite of broadcasting transmission services including providing transmission equipment, distributing broadcasting content across the signal distribution network to end-users, handling maintenance and managing quality of service amongst others.

We describe this service in more detail below.

In addition, the following services (which are provided in adjacent markets) are needed to enable the delivery of content to end-users:

• Conveyance or linking services;

- Ancillary technical broadcasting services (e.g. Conditional Access systems, Set-top boxes, Electronic Program Guides); and
- Production of Broadcasting Content.

For the purposes of this inquiry, the services provided in these three 'adjacent' market sectors are outside the scope of this review and are excluded from the analysis.

4.2 Retail Markets

4.2.1 Retail market for television and radio broadcast content

It is the Authority's view that, at the retail level, television and radio cannot be regarded as substitutable product markets. Rather, it is likely that they are complementary services. Radio and television offer quite different broadcasting services to end users (Radio provides audio services only while television offers audiovisual). The costs of producing content are quite different as are the production values. As a result the content produced for TV and for Radio is often essentially different, which results in very different usage and experiences for consumers. For example, music appears to be a key component of the service offering on Radio while for TV it is dramas and series, sports and movies. Hence, the areas of use for radio and TV appear to differ substantially.

Television and radio are also used differently by consumers and radio is often consumed via mobile units such as car radios, portable radio, MP3 players, mobile phones, whilst television programs are usually watched on stationary devices at home.

In light of this, it may be argued that the needs of radio listeners are not met by television and vice versa. Hence, the Authority's initial view is that radio and television are two different products/services at the retail level. As such the initial view of the Authority is that the retail markets for television and radio are in separate functional markets.

4.2.2 Retail market for satellite and terrestrial content; digital and analogue content

The number of programme services that end users can receive via analogue terrestrial networks is limited to 5 national television channels (SABC1, SABC2, SABC3, e.tv MNet), 18 radio channels provided by SABC (which have a mixture of national and regional footprints) , in addition to commercial radio stations and community stations

(both TV and radio). Considerably more television channels are available via satellite, including niche channels, exclusive coverage of sporting events and movie channels.

End users who have a television set are obliged to pay a licence fee and have free access to the television programmes broadcast via analogue terrestrial networks by free-to-air' channels. Receiving radio programming over terrestrial networks is also free of charge to end users.

Satellite services are available by subscription. The Authority considers that one of the main reasons that end users choose to acquire a satellite dish is a desire for services that are different from - and in addition to - the channels broadcast on the terrestrial networks. Another reason may be the poor coverage or quality of the terrestrial transmissions since the satellite broadcasters must carry the South African terrestrial channels in addition to their own channels. As a result, the Authority considers that broadcasting transmission services on satellite networks should not be regarded just as a substitute to free-to-air terrestrial TV channels, but should be regarded more as a complementary service.

On the end user level there are switching costs for consumers who switch from terrestrial networks to satellite (whilst these costs will not arise when switching the other way). The Authority assumes that end users' preferences and choices are primarily governed by coverage, content and price and less by which technical platform is used for transmitting programming.

DTT is still being rolled out in South Africa but digital transmission is already used for satellite broadcasting. Once digital television services are widely available on the terrestrial network and in the period where it co-exists with analogue during the digital switchover there may be a separate retail market for digital content compared to analogue content on terrestrial networks. This is due to the fact that different equipment is needed to receive digital television content compared to analogue content. In addition, those seeking to receive a digital signal are likely to have a preference for multi-channel viewing. These customers may be prepared to pay more to receive digital television and are unlikely to provide a constraint on the providers of analogue content. Similarly, a rise in the TV licence fee is irrelevant for the switching decision from analogue to digital as digital viewers (such as those receiving DSTV) still need to pay the TV licence fee. Advertisers may choose to switch to alternatives as a result of increasing prices but it is unclear how much of a price increase the market can bear. Given that end-users of terrestrial content do not pay for the content (except for the TV licence fee), any rise in

the price of terrestrial broadcasting transmission services will not have any direct impact on the cost of viewing content for the end-user. A potential impact could be a reduction in spending on programmes, but given that Public Broadcasting Services are broadcast on both formats (terrestrial/analogue and satellite/digital), the reduction in programming spending would be evenly spread. For these reasons, the Authority considers that a rise in the price of transmission on the terrestrial network is unlikely to have an impact on the retail market (i.e. through viewer or advertiser switching).

Since DTT is yet to be introduced widely in South Africa (there are currently trials in parts of the country), it is not appropriate to define separate markets at the retail level for digital and analogue broadcast content, though the Authority considers that once DTT is widely available due to switching costs and different coverage for the two technologies, it may be that digital and analogue television are in separate retail markets.

4.2.3 Initial views on the retail market for broadcast of content to end-users

The Authority considers that the following markets may exist at the retail level in South Africa:

- Television content broadcast to end-users by terrestrial transmission;
- Television content to end-users by satellite transmission; and
- Radio content broadcast to end-users by terrestrial transmission.

The Authority notes that the approach used to define retail markets is consistent with the approach used in other countries where the wholesale broadcasting transmission market has been reviewed.

4.3 Wholesale Broadcasting Transmission Market – Managed Transmission Services

Applying the definitions used in the ECA, a MTS for broadcasting services can be considered as a wholesale service.

The ECA defines wholesale as:

"... the sale, lease or otherwise making available an electronic communications network service or electronic communications service by an electronic communications network service licensee or an electronic communications service licensee, to another licensee ..."[21]

[21]Chapter 1 of the ECA

As a managed transmission service which is provided by one licensee to another, the Authority considers that it is a 'wholesale' service. This approach is consistent with the approach used in other countries where these markets have been reviewed (e.g. Norway, Ireland, UK, France, and Australia).

The Authority's initial view is that there are separate product markets for:

- The provision of managed transmission services for satellite broadcasting;
- The provision of managed transmission services for the purpose of providing analogue (and digital, when available) terrestrial broadcasting transmission services within South Africa to deliver television broadcasting services;
- The provision of managed transmission services for the purpose of providing terrestrial broadcasting transmission services within South Africa to deliver radio broadcasting services at a local level;
- The provision of managed transmission services for the purpose of providing terrestrial broadcasting transmission services within South Africa to deliver radio broadcasting services at a location other than at a local level.

The Authority considers that a national market definition is appropriate for all the product markets identified.

The Authority notes that the approach used to define wholesale broadcasting transmission markets is consistent with the approach used in other countries where this market has been reviewed. The actual markets defined can differ based on factors such as the pervasiveness of different broadcasting platforms (for example, cable has been defined as a separate market in some countries where it is a significant broadcasting technology).

4.4 Product Market Definition

4.4.1 Managed transmission services for satellite and terrestrial broadcasting

Demand in the wholesale market is derived from retail market demand, and is thus primarily affected by price and the type and quality of content. Customers in the wholesale market comprise licensees that produce content and those that distribute as well as licensees that do a mixture of both.

For broadcasters it is important to be present on the network that reaches the most customers. To reach end-users who receive programming via terrestrial networks,

broadcasters cannot choose to purchase managed transmission services solely on satellite networks. This indicates that there is a clear division between analogue terrestrial networks on the one hand, and satellite on the other. If broadcasters wish to reach almost all households, they cannot choose only one network for delivering broadcast content, since the coverage and availability vary between the different networks.

In addition, as discussed earlier, many broadcasters have explicit licence obligations requiring them to cover a certain percentage of the population. As many end-users can only access broadcast content through the terrestrial network, it means that in order for broadcasters to fulfil their licence obligations they have no choice but to purchase MTS from the terrestrial network supplier. Supply-side substitution in this market exists when a provider of MTS can offer customers an alternative if the current provider of MTS raises their prices.

The analogue terrestrial network in South Africa is unlikely to provide a real alternative to purchasers of MTS on satellite TV networks, because terrestrial networks have a capacity to distribute only a handful of channels. The move to DTT in the future will allow more channels to be carried in the terrestrial network but the total number of channels is still likely to be less than those available on satellite networks. Nor will broadcasting transmission services on satellite TV networks be a real alternative to the public service broadcaster, SABC as it will be unable to fulfil its population coverage licence conditions if it moved off the terrestrial network and onto to the satellite network. For a broadcaster to opt out of one distribution platform is likely to involve a substantial regulatory and commercial risk.

Apart from Orbicom, which only supplies terrestrial MTS to MNet, there is no alternative terrestrial network supplier to Sentech in South Africa. Due to a range of factors such as high entry barriers, large sunk costs, and long-term contracts with existing broadcasters, it is unlikely that there will be a firm willing to enter the terrestrial broadcasting market to compete with the existing terrestrial providers (Sentech and Orbicom).

In the Authority's view, circumstances on both the supply and demand side indicate that terrestrial networks and satellite networks are in separate markets for MTS.

4.4.2 Managed transmission services on the terrestrial network for radio and television broadcasting, to deliver broadcast content to end-users

This section examines whether the provision of MTS to radio broadcasters on the terrestrial network is part of the same market as the provision of MTS for television broadcasters on the terrestrial network.

If a radio broadcaster faced a 10% price rise from its supplier of MTS, it is unlikely to find MTS for television broadcasting to be an effective demand-side substitute. This is due to the following reasons:

- MTS for Television uses a different technology (transmitters, power levels etc.) to MTS for radio;
- The cost of MTS for television broadcasting is much higher than the equivalent service for radio[22]; and
- Different spectrum is used for MTS for television broadcasting compared to the equivalent MTS for radio.

Similarly, if a television broadcaster faced a 10% increase from a hypothetical monopolist of MTS, they are unlikely to find an adequate substitute in MTS for radio. Television viewers would expect television content and are unlikely to accept radio content as an equivalent alternative.

On the supply side, Sentech supplies MTS for both radio and television broadcasting. There is no existing alternative national provider of MTS for radio that could switch production to provide an equivalent service for television broadcasters. However, the Authority is aware that there are a number of radio broadcasters who self-provide their broadcasting transmission requirements. The Authority considers that it is very unlikely for this to raise the potential for these firms to switch their production and supply for the following reasons:

- Radio broadcasters who self-provide MTS would need to reconfigure their equipment as well as invest in new equipment to be able to transmit to the required frequency for television transmission;
- Investment in expanding the coverage of the network to meet with the requirements of television broadcasters is likely to be required;

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22 The Authority understands that the transmission of radio requires a smaller portion of the existing infrastructure, both in terms of masts and the amount of transmission capacity, than the transmission of television signals. The investment needs are thus correspondingly smaller with correspondingly lower entry barriers.

- Retraining would be needed to deal with the different requirements for MTS for television.

Thus switching production into MTS for television is likely to involve a significant cost making it unrealistic within the timeframe for demand side substitution to occur (over then next 2-3 years). The Authority considers that it is unlikely that there will be any supply-side substitution of MTS for television from local providers of MTS for radio to the extent that it undermines a profitable price rise by a hypothetical monopolist in MTS for television.

The only alternative potential suppliers which currently might be able to provide MTS for radio broadcast are Orbicom and ODM. However, neither of these licensees currently provide MTS for radio and there are likely to be considerable coverage problems as well as significant costs involved in switching production that will make it unlikely that these licensees provide an effective constraint on the current provider of MTS for radio.

On the other hand, there are likely to be economies of scale and scope in using the same sites and masts for both radio and television MTS. This is due in part to the ability of the MTS supplier to use the same maintenance and sales force to provide services for both radio and television. Hence, it is likely that there will be strong commercial incentives for the same provider to provide both MTS for television and radio (especially at a national level, where the network will comprise a number of transmission sites across the country). Any competitive constraint that may act on a hypothetical monopolist of sites used for radio and television would have to come from a provider offering a similar suite of services.

For these reasons, the Authority considers that MTS for television broadcasting can be considered to be in separate markets to the MTS for radio broadcasting.

4.4.3 Managed transmission services on the terrestrial network for local and non-local radio broadcasting

The Authority considers that there are a number of factors that suggest that the market for MTS for radio broadcasting on terrestrial networks differs somewhat according to whether the programs are local or national and/or regional in nature (i.e. non-local).

Owing to the limitations in the licences and frequency allocations, a local radio broadcaster will only obtain access to frequencies reserved for local broadcasting,

whereas a regional and/or national radio broadcaster will only obtain access to frequencies reserved for regional and/or national purposes. In addition, spectrum is a limited resource, and there are complex regulatory processes involved in changing existing frequency plans and frequency use. Furthermore, it may be resource-intensive to implement changes in frequency use from a purely practical standpoint. Frequencies reserved for broadcasting may not be freely bought and sold. This makes it difficult to substitute between local and national and/or regional transmission services via terrestrial networks.

Substitution between local and national and/or regional transmitter networks is also limited owing to technical and cost factors, including the different ranges of transmitters, inappropriate placement of masts and problems with radio spectrum interference. To avoid harmful interference from other adjacent sub-national broadcasters, transmitters with more limited power may be appropriate for the purposes of local broadcasting. This may help to limit substitutability between transmission services for local and those for national and/or regional broadcasting.

Due to frequency and regulatory limitations, it will not be possible to substitute local and national and/or regional programming. A local radio station will not demand transmission capacity meant for national radio or vice versa. In addition, content that is meant for a particular community will not necessarily be relevant to national audience.

Due to geographical boundaries that are stipulated in broadcasting licences, a broadcaster purchasing a MTS for local radio broadcasting cannot switch its demand to a MTS service in another licensed area.

On the supply side, a hypothetical monopolist of MTS for local radio broadcasting may be constrained from raising prices by 10%. This is due to the likelihood of alternative supply-side options being available, due to low barriers to entry into the market. For example, the Authority notes evidence from industry that a significant number of community broadcasters (~40%) do not purchase their MTS from Sentech. This suggests that 40% of community broadcasters (many of which have licences within small geographical areas) self-provide their broadcasting transmission requirements.

In the Authority's view, this indicates that MTS for local radio broadcasting is in a separate market to MTS for national and/or regional radio broadcasting.

4.4.4 Managed transmission services for analogue and digital terrestrial broadcasting

While DTT is still being rolled out in South Africa, the Authority considers it useful to provide some initial views on whether MTS for analogue and digital broadcasting on the terrestrial network are in the same market. This analysis is likely to be important over the next 2-3 years as new contracts for digital terrestrial MTS are being negotiated between broadcasters and the supplier of Digital Terrestrial MTS.

It is likely that the same sites will be used for both analogue and digital terrestrial broadcasting. There are likely to be economies of scope in the provision of MTS for both analogue and digital terrestrial broadcasting (sales and maintenance teams are likely to be able to service both). As such, it is likely that a MTS supplier is likely to exploit these economies of scope by providing both analogue and digital MTS. If the same sites are used for both analogue and digital MTS then this will enable the supplier to offer a more competitive service compared to providing only analogue MTS. Broadcasters are likely to choose suppliers that can offer the most competitive prices for wholesale broadcasting transmission, whether analogue or digital. This analysis is consistent with the current trends in the market as Sentech is investing heavily in DTT. It seems reasonable to assume that Sentech will provide MTS for both analogue and digital terrestrial broadcasting using the same site network.

As such, the Authority considers that the provision of a suite of services using the same sites may indicate that analogue and digital MTS are part of the same market. It is the Authority's initial view that once MTS for digital terrestrial broadcasting is offered that it will be part of the same market as MTS for analogue terrestrial broadcasting.

4.5 Geographic markets

The geographic market may be defined as that area in which the relevant product is offered on approximately similar and sufficiently homogeneous conditions of competition. The degree of substitutability on both the supply and demand sides may be taken into consideration in the assessment of the geographic market and, as part of such a substitutability assessment on the demand side, preferences and geographic purchase patterns should be taken into account. In practice, geographic markets in the electronic communications sector tend to be determined by reference to the relevant network's licensed area of coverage as well as the jurisdictional boundaries of the legal regulation of the market.

4.5.1 Terrestrial Networks

In earlier sections, the Authority concluded that television is in a separate product market to radio and that radio broadcasting should be divided in separate local and non-local product markets. In South Africa, broadcasters demand television and radio transmission services on both a national and/or regional level and local level. Local radio broadcasting is divided into many licence areas across the country. This may suggest that the market for transmission services for local radio should consist of numerous relevant markets based on the number of geographic licensed areas.

However, Sentech has indicated to the Authority that it is the only provider of managed transmission services for terrestrial television broadcasting. For radio, the situation is somewhat different. For national and regional radio broadcasters, Sentech is the only provider of managed transmission services. At the local level, Sentechhas indicated that it provides MTS to 60% of community broadcasters[23].

This suggests that around 40% of community broadcasters self-provide or in some other way obtain broadcasting transmission services. However, the Authority is not aware of any alternative commercial providers to Sentech of transmission services for local radio broadcasting. That is, local radio broadcasters either build their own networks or lease all or part of their capacity requirements from Sentech.

To the Authority's knowledge, Sentech's services are not differentiated geographically in respect of product, quality and price. This applies both to MTS for radio and to television.

While there is scope for supply side substitution at the local level for MTS for radio (particularly self-provision by radio broadcasters), the Authority considers that it is appropriate to consider the market as national in scope. Dividing the market into numerous geographic areas (according to licence areas) is impractical. As the competitive dynamics within each market change over time (as licensees enter and exit the market for MTS), this would mean that the boundaries identified by the Authority would be unstable and change over time. Also, it is not clear that such an exercise can be carried out with any degree of accuracy.

Since Sentech is the only provider of managed transmission services for national free-to-air television and radio broadcasters these networks by their very nature cover the

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23Sentech response to ICASA questionnaire as well as Sentech (2010), Annual Report, p. 6.

whole country, the Authority assumes that the geographic market for transmission services for national radio and television, respectively, is all of South Africa. For regional broadcasters, the Authority considers that the competitive conditions are similar across regional areas and hence can be considered national in scope.

In summary, the Authority considers that all the product markets identified for MTS on the terrestrial network are national in scope.

4.5.2 Satellite broadcasting

Suppliers of MTS for satellite broadcasting in this market are chiefly international, and the relevant market is not necessarily limited to South Africa. The market is more a consequence of a satellite's footprint, which varies somewhat from one satellite to another. However, it appears fair to assume given the nature of the technology, that each supplier of MTS for satellite broadcasting has 100% population and geographical coverage across South Africa.

Sentech operates a satellite broadcasting platform called Vivid. Sentech states that the Vivid platform offers facilities for satellite based broadcasting, making signals available to end-users that do not have access to terrestrial television and radio transmission[24].Orbicom operates a satellite transmission network and provide MTS solely to MultiChoice broadcasters (DSTV and MNet). ODM self-provides its MTS for satellite broadcasting.

There are factors that may suggest that the market for transmitting broadcasting services via satellite is a trans-national market. Trans-national means extending or operating across national boundaries[25].For the most part satellite operators provide transmission services over wide regional footprints depending in part on the type of satellite and orbit in which it is placed. It is in the satellite operator's economic interests to serve as many customers as possible and hence broadcast footprints tend to extend over several countries in a region. It is not appropriate (as well as being beyond the Authority's legislative remit) to define markets beyond South Africa's borders. In light of this, the Authority considers that the nature of satellite transmission renders the market for transmitting TV and radio via satellite as being trans-national. However, given that satellite broadcasters are able to limit some broadcasting content to only be available

[24]Sentech Annual Report (2010), p. 5.
[25] http://oxforddictionaries.com/view/entry/m_en_gb0878030#m_en_gb0878030

within national borders (i.e. SABC channels), it may be appropriate to define the geographical market as national in scope.

Hence, the geographic market could be defined as either national or trans-national in scope. The Authority seeks more information from industry to assist with the market definition.

4.6 Summary of conclusions on Market Definition

Table 2: Summary of conclusions on market definition

List of Proposed Product Markets	List of Proposed Geographic Markets
1. MTS for Television Broadcasting (Analogue and Digital)	National
2. MTS for Radio Broadcasting (Local)	National
3. MTS for Radio Broadcasting (Non-Local)	National
3. MTS for Satellite Broadcasting	Either National or Trans-national

Questions for stakeholders from Chapter 4:

8. Do you agree that the appropriate wholesalebroadcasting transmission service is a Managed Transmission Service? If not, please provide information on an alternative product definition.
9. Do you agree with the list of retail markets that have been identified by the Authority?
10. Do you agree with the list of wholesale markets for MTS that have been identified by the Authority?
11. Do you agree that MTS for satellite and for Terrestrial are in separate markets?
12. Do you agree that MTS for Radio and MTS for Television are in separate markets?
13. Do you agree that MTS for local radio broadcasting is in a separate market to MTS for national and/or regional radio broadcasting (i.e. non-local radio broadcasting?)
14. Do you agree that MTS for Analogue and Digital broadcasting should be considered in the same market?
15. Do respondents agree that the geographic markets for all markets defined for

MTS on the terrestrial network are national in scope?

16. Do respondents have any views on the correct geographic market definition for satellite broadcasting services? Should it be defined as national or trans-national?
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?

5. ASSESSMENT OF MARKET POWER AND IDENTIFICATION OF LICENSEES WITH SMP

5.1 Introduction

This section provides an initial assessment of market power in the markets that have been defined by the Authority.

The nature of the broadcasting industry and television in particular is that broadcasters tend to enter into long-term contracts for the provision of wholesale broadcasting transmission services. The Authority notes that transmission supply contracts between Sentech and the television broadcasters are very long term in nature and often for as long the licensee has a licence (an 'evergreen' contract).

The Authority notes that over the next 2-3 years the industry will need to manage the switchover to digital broadcasting on the terrestrial network. This will involve the re-negotiation of existing terrestrial broadcasting transmission supply contracts. The analysis in this section covers the period of development and contracting for this important change to the industry.

5.2 Assessment of market power in the market for managed transmission services for terrestrial television broadcasting (analogue and digital)

The Authority considers that Sentech has Significant Market Power in this market. As a result this market has been found not to be effectively competitive. The reasons for this are discussed below.

5.2.1 Market share

Sentech has a high market share in the market and this has persisted for many years.There are two providers of MTS on the terrestrial network in South Africa: Sentech and Orbicom. Orbicom only provides MTS to M-Net.

While the Authority recognises that the audience share percentages would include viewers on satellite as well as terrestrial networks, it considers that audience share numbers provide a useful proxy for the relative market share of Orbicom and Sentech for MTS on the terrestrial network. Using this data, and excluding DSTV from the analysis (as DSTV does not broadcast on the terrestrial network), the broadcasters using Sentech's network make up around 99% of the total audience share, while Orbicom's customer (MNet's satellite broadcasting service and DSTV) make up only 1% of the total viewing audience.

E.tv provided the Authority with viewing figures for the major television stations in South Africa for the period January to September 2010. This data is presented in **Table 3**.

Table 3: Channel Audience Share: January-September 2010

Television Channel	Viewer figures (%)
e.tv	20.4
SABC 1	29.6
SABC 2	16.4
SABC 3	13.5
MNet	1.5
DSTV	17.1

Source: e.tv based on AMPS

Using this information, it appears clear that Sentech has a very high market share, which is likely to have persisted for many years.

5.2.2 Actual and potential existence of competitors

As discussed above, there are two existing operators in the market that provide MTS on the terrestrial network. Orbicom has a small terrestrial network when compared to

Sentech (Orbicom231 sites[26] to an estimated 1200 sites for Sentech[27]). The Authority understands that Orbicom purchases a MTS from Sentech in order to provide a national coverage for its sole customer M-Net.

The Authority notes that while Orbicom and Sentech are in the same market, Orbicom has chosen to only provide services to MNet and Multichoice. This means that other broadcasters have no choice but to purchase MTS from Sentech.

The Authority considers that it is unlikely that there will be potential new competitors entering the market in the next 2-3 years. This is for a number of reasons, including:

- The high sunk costs and investment required for a new entrant;
- The existence of long-term contracts that will make it difficult for a new entrant to entice existing customers of MTS away from the current suppliers; and
- Technological barriers that would make it difficult for a new entrant to provide a equivalent service to existing suppliers (e.g. if a new entrant built a new network of transmission sites, then the direction of all the antennas for existing customers would need to readjusted in order to provide a equivalent service).

Given these barriers to entry, it is difficult to see how a new entrant could justify the significant investment that would be required to enter the market and compete with existing suppliers.

5.2.3 Level and trends in market concentration

The market is highly concentrated. Sentech has a market share of at least 45% and for many broadcasters is the only option for the supply of MTS for television broadcasting. The Authority considers that this is unlikely to change. Sentech is likely to be in a strong position to win any renewal or extension when existing contracts expire (or when new contracts for DTT are negotiated). This limits the potential for new entry into the market.

5.2.4 Overall size of each of the market participants

The Authority does not have detailed information on the relative size of Orbicom compared to Sentech in the provision of MTS for television broadcasting. However, the size of the respective networks can be estimated in a number of ways:

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[26]Data taken from Orbicom's response to ICASA's industry questionnaire circulated as part of this inquiry.
[27] Estimated from Sentech Annual Report 2010

- Number of Terrestrial Transmission Sites – Orbicomhas 231 sites versus Sentech which is estimated to have over 1200 sites; and
- Revenues (Sentech reports revenues from Terrestrial television of R345, 640,000 in 2010 in its 2010 Annual Report). Orbicom does not report its revenues.

5.2.5 Technological advantages or superiority of a given market participant

Given the maturity of the analogue terrestrial network, it is not clear whether Sentech has any superiority *per se* in the provision of MTS. However, given the investment in the network over many years (including a period when it had exclusivity through legislation regarding transmission high sites), it benefits from considerable economies of scale and scope compared to Orbicom as well as any potential new entrant.

In addition, Sentech has been investing heavily in DTT. This has been funded by Government in order to enable the switchover to Digital TV to meet international and national policy guidelines. As a result, Sentech has significant benefits in providing a MTS for DTT when compared to Orbicom or a potential new entrant.

5.2.6 Degree of countervailing bargaining power

Broadcasters are unlikely to exert any significant countervailing bargaining power. Apart from MNet, none of the other broadcasters has a choice of provider. Due to licence obligations that require broadcasters to provide service to a certain percentage of the population, only a MTS over the terrestrial network allows these licence conditions to be met.

Satellite broadcasting could potentially provide an alternative way to reach the required population coverage, but given that only a minority of the population have the equipment needed to receive satellite broadcasting, this is not a realistic option. As such, broadcasters are unable to threaten to take their business elsewhere.

As far as consumers are concerned (viewers), they are likely to be indifferent to the identity of the supplier of transmission. Since consumers do not pay a charge for transmission, or even a charge for broadcasting based on the level of consumption, their consumption decision cannot impact on the structure of the market. Since the transmission supplier has to provide transmission to a specific quality required by consumers, the choice of transmission supplier is therefore unlikely to be relevant in a

consumer's decision to consume television broadcasts. Consumers pay a licence fee irrespective of the amount of viewing consumed. In addition, it would not matter from a consumer's perspective whether the content is provided over terrestrial or satellite networks (i.e. they would still be required to pay a licence fee). Given this, a decision by a consumer to switch from terrestrial TV to a satellite platform will have no impact on the incentives for pricing of terrestrial transmission. As such consumers have no countervailing bargaining power with respect to the pricing of terrestrial transmission services.

5.2.7 Easy or privileged access to capital markets or financial resources

The Authority considers that this factor may have a significant impact on the market analysis. Sentechis a Government owned entity, and as such will have access to government funding, or other funding at the privileged rates that Governments may attract. Sentech is therefore likely to be in a privileged position compared to privately funded entities.

5.2.8 The ease of entry into the market, economies of scale and scope and control over essential facilities

There are a number of significant barriers that make new entry unlikely over the period of this review (2-3 years). As such, it is likely that Sentech will continue to be the sole provider of MTS to the majority of national broadcasters of radio and television on the terrestrial network[28].

The most significant entry barriers in the market include:

- Broadcasters appear to prefer an 'all in one' solution from a single provider with a guaranteed level of service quality. This indicates the value of a national team of sales and engineering staff from one company as it would be more difficult to maintain quality using regional or local sub-contractors. The desire for an all-in-one solution also strengthens the importanceof track record and existing commercial relationships as a barrier to other new entrants;
- The specialised nature of broadcasting technology which is outside the experience and expertise of most of the existing national engineering field-forces (such as those in other utility sectors); and

[28] Except for MNet who purchases terrestrial MTS from Orbicom

- The likelihood that multi-service customers will continue to want to use one provider for all of their broadcasting transmission services. There are likely to be economies of scope of provision (e.g. the benefits in dealing with one supplier for both radio and television MTS). Also, the forthcoming complex digital switchover project will need to be managed effectively. Customers are unlikely to be keen to purchase MTS from different suppliers during this switchover period.

The Authority notes that DTT has only been rolled out to a small number of sites (and households) and the service itself is still at a pilot stage in a small number of geographic regions across the country. One view is that as digital television is rolled out (and digital transmission is built out to a larger number of sites across the country), there may be potential for third parties to begin to provide MTS from these other sites. However, the Authority believes that this is unlikely to happen in the short to medium term as broadcasters will still prefer to use a single supplier for their digital MTS services.

Historical commercial relationships are likely to be very important in this market. Sentech has been providing MTS to national television and radio broadcasters for many years. They have established procurement, installation, maintenance and monitoring systems to deliver broadcasting transmission services to the quality demanded by their customers in order to meet their licensing requirements (such as the population coverage obligations). Also, a significant part of the costs that Sentech incurs in providing MTS has already been incurred and represent "sunk cost". Sentech's transmission network has been built up over a number of years and a new entrant would need to incur significant upfront investment in order to provide an equivalent MTS to existing customers.

In addition to the significant upfront costs in building a transmission network that could provide an equivalent service to compete with the service supplied by Sentech, a new entrant is likely to face difficulties in convincing existing Sentech customers to switch to a new supplier. A broadcasting customer would need to be convinced that a new entrant with no track record of supplying MTS would be able to deliver a comparable service to that provided by Sentech.

Existing broadcasters and future multiplex licensees are possible new entrants for supplying MTS. In the same way that MultiChoice has Orbicom to supply MTS to its two broadcasting companies (DSTV and MNet), the same structure could potentially occur with other broadcasters. However, in response to question 1.5 of Part B of the Questionnaire, existing broadcasters such as e.tv and SABC have indicated that they

are unable to invest in the range of expertise and skills required to develop an alternative MTS supplier as it is not their core business.

A key characteristic of the market is the agreement of long-term contracts between Sentech and its customers (such as SABC). The long-term nature of these contracts are explained in part by the need to ensure stability of revenues in order for Sentech to invest inthe network as well as a stability of the supply of transmission services to enable broadcasters to meet their licence obligations. This would make it difficult for new entrants to get business from existing broadcasters.

The staggered timing of existing contracts (with some contracts being agreed into perpetuity) would make it difficult for a new entrant to plan its network and build a business case that allows an adequate return on its investment. It will additionally be difficult for a new entrant to compete for the business of existing customers. For example, if an existing customer chose to exit from an existing contract, therefore facilitating new entry, it will likely trigger compensation payments to Sentech.

Apart from Orbicom, which has developed a small terrestrial network there has been no evidence of any entry into the market from either broadcasters or from firms from other markets to provide MTS for national television broadcasting. This is despite the changed licensing regime that now allows any firm with the appropriate licence to self-provide broadcasting transmission services. However, as discussed earlier, Orbicom has chosen to only provide MTS to M-Net so does not offer a competing service to other broadcasters. Hence, broadcasters have no choice but to purchase MTS from Sentech.

5.2.9 The dynamic characteristics of the market

As the industry moves from analogue to digital transmission, it is clear that there are major technological change will occur in the industry over the next few years. However, in terms of the supply of MTS for television broadcasting, many of the same structural features of the service will remain in place over the time period of the market review. This is due to the fact that it is proposed that analogue and digital transmission co-exists (dual illumination period) over a period of time to help with the transition to DTT.

On the terrestrial network the fundamental requirements of providing a MTS will remain, such as the need to secure mast and sites for transmission services as well as the associated services that make up a managed transmission service including procurement, installation, monitoring and maintenance. Many of these competencies are

common to both analogue and digital MTS. It is likely that broadcasters will still require a certain level of service quality as well as specific coverage in order to meet their licence obligations. Hence, it appears that there is little scope for innovation or product augmentation that could encourage a new entrant to provide a differentiated product to entice existing customers away from Sentech. The presence of excess capacity in a market means that the producers are more likely to compete on price in order to capitalise on the available capacity. However, owing to the service being delivered by dedicated equipment and specialised staff, there is no evidence that excess capacity is a characteristic of this market.

The Authority considers that there is likely to be a low elasticity of demand for MTS on the terrestrial network. This is due to the fact that obtaining MTS is a necessary requirement for broadcasting on the terrestrial network. Once the broadcaster has obtained the necessary spectrum and broadcasting licences, they can only fulfil their licence obligations to reach a certain percentage of the South African population by obtaining MTS from the terrestrial network supplier. There is no scope for the broadcaster to respond to an increase in the price of MTS by reducing demand or to substitute to an alternative transmission platform, such as satellite. While satellite broadcasting may have wide geographic coverage in South Africa, the fact that most end-users only have access to the terrestrial network to obtain television content means that broadcasters would not be able to meet their licence obligations if they switched their supplier of MTS to a satellite signal distributor.

DTT provides the potential for new sources of demand; however, due to the greater efficiency of spectrum use, it is unlikely to lead to higher volumes of MTS in aggregate.

The maturity of the market suggests that Sentech is unlikely to have any realistic threats of competition from new entrants, given the lack of dynamism and the existence of legacy contracts in the market

5.2.10 The nature and extent of vertical integration

The Authority does not consider that this factor has a significant impact on the market analysis. Sentech is not vertically integrated (i.e. it does not produce content). Orbicom is part of a broader group of companies, which include a distributor of content (MNet), however, given Orbicom's relatively small market share (compared to Sentech); this does not have a significant impact on the competitive analysis.

5.3 Assessment of market power in the market for MTS for radio broadcasting (non-local terrestrial)

This market is defined as managed transmission services that are provided to radio broadcasters that have licensed areas that are national or regional in scope. Local broadcasting is not included in this market and has been defined separately.
The Authority considers that Sentech has SMP in this market and that competition has been found to be ineffective.

5.3.1 Market share

The Authority understands that Sentech is the only supplier of MTS for national and/or regional radio broadcasting (i.e. non-local). Hence, it has a 100 per cent market share in this market.

5.3.2 Actual and potential existence of competitors

Sentech is the only supplier in the market. Similar to the analysis for MTS for television broadcasting, the Authority considers that it is unlikely that any new entrants will emerge in the near future.

5.3.3 Level and trends in market concentration

Sentech currently has 100% market share at the national and/or regional market and it had maintained this dominant market share since it began providing services to the industry. Its existing high market concentration was built up over a number of years when it had exclusivity over the high-sites for transmission masts. The inability for any firm to provide a MTS in the years while the national transmission network was being rolled out is likely to be a contributing factor to why the market is highly concentrated.

5.3.4 Overall size of each of the market participants

Sentech is the only provider in the market. Sentech has not provided a detailed breakdown of its revenues for the non local terrestrial radio broadcasting market, to allow for an estimate of the absolute size of its business in this market segment.

5.3.5 Technological advantages or superiority of a given market participant

Similar analysis can be applied in this market to that used for Sentech's market advantages in MTS for television broadcasting.

5.3.6 Degree of countervailing bargaining power

There is little to no countervailing bargaining power for radio broadcasters or for end-users (listeners) due to the lack of choice of other MTS providers and Sentech's 100% market share, and the relative scale of an individual radio broadcaster's contract compared with Sentech's overall revenues. Similar analysis can be applied in this radio transmission market to the analysis used for MTS for television broadcasting where Sentech has more than 98% market share.

5.3.7 Easy or privileged access to capital markets or financial resources

In a similar manner to the analysis made above for the market for MTS for television broadcasting, Sentech is a Government owned entity, and as such will have access to government funding, or other funding at the privileged rates that government may attract. Sentech is therefore likely to be in a privileged position compared to privately funded entities.

5.3.8 The ease of entry into the market, economies of scale and scope and control over essential facilities

Similar analysis can be applied in this market to that used for Sentech's market advantages in MTS for television broadcasting. The Authority considers there are high barriers to entry as well as significant sunk costs that would be faced by a new entrant. It is difficult for existing broadcasters to self-provide in this market, given the need to have a dedicated maintenance team to manage the quality of the MTS. Broadcasters have told the Authority that they do not have the necessary in-house skills to self-provide transmission services and consider that Sentech is the only option for their MTS requirements.

Based on the country-wide Infrastructure that Sentech controls and the customer base that it attracts, the Authority regards Sentech as benefiting from economies of scale. In addition, due to the network of high sites and towers, Sentech benefits from economies

of scope since it may place transmitters for television, radio and potentially other technologies on its towers.

Although the facilities required for wholesale broadcasting transmission are extremely difficult and potentially very expensive to duplicate, the facilities may be duplicated if an entrant firm really wished to make the significant investment. The Authority, therefore, does not consider these to be "essential facilities", as tested against the definition in the ECA.

5.3.9 The dynamic characteristics of the market

Similar analysis can be applied in this market to that used for Sentech's market advantages in MTS for television broadcasting.

5.3.10 The nature and extent of vertical integration

The Authority does not consider that this factor has a significant impact on the market analysis.

5.4 Assessment of market power in the market for MTS for radio broadcasting (local terrestrial)

This market is defined as managed transmission services that are provided to radio broadcasters that have small geographically licensed areas or, in other words, are local in scope. The Authority considers community broadcasters are customers of MTS in this market. National and regional radio broadcasting is not included in this market and has been defined separately.

The Authority considers that Sentech has SMP in this market based on its market share and therefore the market has been found to be ineffectively competitive.

5.4.1 Market share

The Authority considers that all community radio broadcasters are local. Sentech has indicated that it supplies MTS to 60% of community radio broadcasters. Hence, the Authority considers that it is reasonable to assume that Sentech has a 60% market share in the local radio broadcasting market.

5.4.2 Actual and potential existence of competitors

While Sentech is the main supplier of MTS to local radio broadcasters, there appears to be a significant portion of the industry that chooses to self-provide their MTS requirements.

5.4.3 Level and trends in market concentration

The Authority does not have detailed data on the level and trends in market concentration in this market. However, Sentech has indicated that it supplies MTS to 60% of community broadcasters (which the Authority considers are all local radio broadcasters). This suggests a highly concentrated market. The new ECA introduced a technology neutral licensing regime that allows licensees to self-provide their transmission facilities. In addition, the electronic communications facilities leasing regulations provide a framework for access to the high-sites and other electronic communications facilities of Sentech as well as other infrastructure providers. This provides an alternative avenue to purchasing MTS from the national terrestrial network (Sentech) for existing broadcasters to self-provide their transmission requirements.

5.4.4 Overall size of each of the market participants

This factor is helpful in assessing market power with reference to the size of the undertaking that might provide an advantage over its competitors.

The Authority considers that the largest provider in this market is Sentech (which offers MTS for local radio broadcasters across the country). With a national terrestrial network it is a significantly larger undertaking than each of the local community broadcasters who self-provide their broadcasting transmission services.

Where local radio broadcasters self-provide their transmission requirements the scope of their transmission network will be equal to the size of their licensed area. The Authority is not aware of any local broadcasters that use third party wholesale providers (who could provide MTS across a larger range of licensed coverage areas). The Authority is also not aware of local radio broadcasters who have pooled their resources and provided broadcasting transmission services beyond the licensed coverage area of an individual broadcaster.

Community broadcasters who indicated that they self-provided their transmission requirements did not provide sufficient information on the size of their operations.

5.4.5 Technological advantages or superiority of a given market participant

Technical advantages or superiority may represent a barrier to entry and also possibly an advantage over existing competitors. Unlike national and regional MTS for radio broadcasting, local MTS is likely to require much lower power transmission and the technology is potentially more reliable. MTS for local radio broadcasting requires less specialised skills in the provision of the service, which allows some local radio broadcasters to self-provide their MTS requirements.

5.4.6 Degree of countervailing bargaining power

Compared to MTS for national and regional radio broadcasting, there is likely to be greater countervailing bargaining power in this local terrestrial broadcasting market as local radio broadcasters do have an alternative to Sentech as a supplier, i.e. to self-provide, or to purchase from a third party MTS party (if one existed).

However, besides self-provision, the Authority is not aware of any other alternative suppliers for MTS at the local level.

5.4.7 Easy or privileged access to capital markets or financial resources

As before, Sentech is a Government owned entity, and as such will have access to government funding, or other funding at the privileged rates that Governments may attract. Sentech is therefore likely to be in a privileged position compared to privately funded entities.

5.4.8 The ease of entry into the market, economies of scale and scope and control over essential facilities

Control or ownership over a large network may present a significant barrier to entering the market, particularly if entering the market requires the entrant to invest significant time and resources to replicate the incumbents' network. Sentech already has an extensive national terrestrial network that provides MTS for local radio broadcasters across the country.

Local broadcasters have the ability to request access to Sentech's transmission sites, as well as the sites of other infrastructure owners to install transmission equipment. Local broadcasters can request and receive access using the provisions of the Electronic Communications Facilities Leasing regulations. These regulations act to reduce the costs of entry into the market for local broadcasters. In this market, therefore, the impact of the economies of scale and scope that Sentech enjoys is reduced. While this regulation is available, however, the Authority understands that these regulations have not been applied in any significant way in this market

5.4.9 The dynamic characteristics of the market

Similar analysis can be applied in this market to that used for Sentech's market advantages in MTS for television broadcasting and for non-local radio broadcasting.

5.4.10 The nature and extent of vertical integration

In considering the local market, local radio stations may, in fact, be vertically integrated to the extent that they self-provide. However, the Authority does not consider that the level of vertical integration in a number of the local radio broadcasters has a significant impact on the market analysis since it does not appear to provide an ability to counter significantly the market power of Sentech.

5.5 Assessment of market power in the market for MTS for satellite broadcasting

Based on the discussion in section4.4.4, the Authority is not in a position at this stage to make conclusive decisions regarding the market power for satellite broadcasting transmission services. Moreover, due to the potentially trans-national nature of this market, the Authority is also not in a position to regulate this market, as the providers of satellite transmission services fall outside of the Authority's jurisdiction.

To clarify this statement, it should be understood that the broadcasters that make use of satellite broadcasting transmission services fall within the Authority's jurisdiction and require licenses, however the satellite broadcasting transmission service providers themselves do not require to be licensed in South Africa.

It is nevertheless noteworthy that the Authority considers that existing market dynamics for the satellite wholesale broadcasting transmission services market tend towards competitive outcomes. While there are likely to be quite high barriers to entry into the

market, there already exist a number of firms supplying MTS for satellite broadcasting in South Africa (Orbicom, Sentech and ODM). In addition, customers of MTS for satellite broadcasting have a range of options when choosing a supplier and can relatively easily switch between suppliers if required. For this reason, it is likely to be difficult for existing suppliers to maintain prices above competitive levels for a sustained period.

In addition, the Authority notes that the channels of free-to-air public broadcasters (SABC 1, 2, 3) are carried by satellite broadcasters at no charge to the public broadcaster. This is due to regulatory conditions that have been imposed on subscription broadcasters that oblige them to carry public broadcasting channels.

The above factors, when combined with regulations already in place (i.e. 'must-carry' 'obligations) mean that the Authority does not consider it necessary to carry out a full market analysis and that no pro-competitive remedies are likely to be needed in this market.

Questions for stakeholders from Chapter 5:

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?
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 (non-local)?
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)?
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?
22. Do you have any data regarding the market, other than that used by the Authority to make its initial views?

6 THE CONSEQUENCES OF MARKET POWER AND INITIAL VIEWS ON PRO-COMPETITIVE REMEDIES

6.1 Introduction

Based on the information set out in the Discussion Document, the Authority has identified the following national markets:

- The provision of managed transmission services for satellite broadcasting;
- The provision of managed transmission services for the purpose of providing analogue (and digital, when available) terrestrial television broadcasting services within South Africa;
- The provision of managed transmission services for the purpose of providing terrestrial radio broadcasting services within South Africa at a local level; and
- The provision of managed transmission services for the purpose of providing terrestrial radio broadcasting services within South Africa at a location other than at a local level.

This section provides an initial assessment of the potential consequences of ineffectivecompetition in the above-mentioned markets. It also provides an overview of potential pro-competitive remedies that can be imposed in light of the Authority's initial views on the level of competitiveness of the defined markets. The Authority considers that further competition is unlikely in the markets for MTS on the terrestrial network (radio and TV). The Authority considers that these markets are not dynamic and have limited prospects for new entry. It is also considers that the current state of these markets is likely to persist for the period under review, even with developments such as the migration to digital television broadcasting.

Chapter 10 of the ECA sets out the approach that the Authority must adopt in addressing anti-competitive behaviour and the procedures it must follow in applying *ex-ante* measures to licensees found to have significant market power within the defined markets where competition is found to be ineffective. The Authority has proposed a definition of the market for wholesale broadcasting transmission services and set out a preliminary assessment of the market in this Discussion Document. In analysing the wholesale broadcasting transmissionservices market, the Authority has set out a methodology that it proposes using to determine the effectiveness of competition and the pro-competitive conditions that may be imposed upon licensees with SMP where the Authority determines such markets or market segments have ineffective competition.

The Analysis suggests that there may be SMP in the terrestrial network in all the 3 defined markets, but not in the MTS market for satellite.

6.2 The Consequences of SMP in the defined markets

In the absence of regulation, licensees found to have SMP can potentially adversely impact the market through exploiting their market power. In the provision of MTS on the terrestrial network, the following potential consequences of market power are relevant:

- Inefficient and excessive pricing of MTS;
- Provision of MTS at an inferior level of quality;
- Delays in providing MTS within reasonable timeframes.

The purpose of proposed regulation of the markets is to ensure that consumers of MTS can secure it on reasonable terms. The purpose of regulation in the wholesale market is ultimately to benefit end-users. In the terrestrial broadcasting market the benefits to end-viewers are likely to be indirect in nature as end-users of 'free-to-air' broadcasting do not pay directly for the service (apart from an annual TV licence fee). The benefits would accrue through, for example, the flow-on effects of lower input costs to broadcasters, which could lead to better quality programmes as well as greater broadcasting content offered.

6.3 Available Pro-competitive Remedies

There are a range of pro-competitive remedies available to address the potential impact of SMP in a market. The ECA provides a non-exhaustive list of remedies or pro-competitive terms and conditions that may be imposed; including but not limited to:

- timely compliance with license terms and pro-competitive conditions.
- to act fairly and reasonably in relation to provisioning of services, facilities leasing and access;
- transparency through obligations to publish terms and conditions;
- non-discrimination;
- accounting separation, and compliance to prescribed accounting methods; and
- price controls, such as cost orientation.

The Authority must, in terms of the ECA, consider all of the potential remedies and decide which are the most appropriate to impose, if any, based on an assessment of the markets.

6.4 Principles to be applied in imposing pro-competitive remedies

Regulatory action is warranted when SMP is found in a properly defined market. In terms of section 67(4)(c), the Authority is required to set out the pro-competitive measures that it may impose in order to remedy the perceived market failure in the markets or market segments found to have ineffective competition.

The Authority is furthermore required to:

- promote an environment of open, fair and non-discriminatory access to broadcasting services, electronic communications networks and to electronic communications services (section 2(g);
- promote competition within the ICT sector (section 2(f);
- refrain from undue interference in the commercial activities of licensees while taking into account the needs of the public (Section 2(y);
- provide access to broadcasting signal distribution and encourage the development of multi channel distribution systems in the broadcasting framework (Section 2(x); and
- promote stability in the ICT sector (section 2(z).

As such, the specific obligations imposed must be based on the nature of the problem identified, and must be proportionate and justified. Proportionality refers to the Authority undertaking the minimum intervention required, to achieve the objective set out.[29] This approach will ensure that regulation, when it is applied, is targeted at addressing market failure in the defined markets. This approach is aligned with requirements for proportionality as set out in several other jurisdictions including the European Union.

In addition to being proportionate, a remedy should be justified and related to solving a potential competition problem identified in the market. As such, each remedy considered in this Discussion Document seeks to address one of the problems of inefficient provision of wholesale broadcasting transmission services. Problems could arise either through raising prices for access to the wholesale inputs above a competitive level, and/or by providing access at an inferior level of quality, as discussed immediately below. The proposed remedies seek to prevent the effects of the potential problems in the markets, and to counter the consequences of SMP in the defined markets. Finally,

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[29]ERG Common Position on the approach to appropriate remedies in the new regulatory framework, page 62

the Authority recognises that all the remedies it proposes to impose must be analysed in a forward looking manner, and has included this in its assessment.

6.5 Potential remedies applicable to the identified markets

The Authority believes that taking into account all of the possible remedies, the behavioural remedies that may be the most appropriate to apply in the MTS markets where the Authority considers competition is ineffective, could include:

- An access obligation;
- A transparency obligation, and specifically an obligation to publish a Reference Offer;
- A non-discrimination obligation, including non-discrimination on pricing;
- A related wholesale price control obligation, where charges for network access would be reasonably derived from the costs of provision; and
- A cost accounting obligation to support the price control obligation.

The approach to each proposed obligation is discussed below.

The Authority is of the view that the imposition of *ex ante* obligations does not depend on the abuse of a dominant position; but it seeks to prevent such abuse. Therefore the Authority has amongst its options, the option to put in place pro-competitive remedies to ensure access, transparency and non-discrimination to enable all broadcasters to compete effectively. The Authority would furthermore seek to introduce the pro-competitive remedies to remove the market distortions that occur as a result of inefficient pricing and low quality service provision.

The remedies are furthermore aimed at providing certainty to the market with respect to the treatment of wholesale broadcasting transmission services in the period under review. The consideration of this market is timely in view of the renegotiation of contracts soon to provide for digital switchover, which may put Sentech in a position of strength as the industry negotiates with it to ensure the timely implementation of DTT rollout. This legal and policy certainty is critical in the interests of licensees and consumers alike.

6.5.1 Access Obligations

In South Africa, the requirement to provide access is one that applies to all parties providing facilities as a general obligation in terms of section 43(1) of the ECA and the

Facilities Leasing Regulations made in terms of that section. All operators must meet reasonable requests for facilities, including equipment like feeders and antennae, which are used by suppliers of MTS to transmit the broadcast signal (i.e. those that are technically and economically feasible and will promote the efficient use of electronic communication networks and services). They must accordingly make information available to facilities seekers with respect to terms and conditions, including prices. Section 43 of the ECA and the Facilities Leasing Regulations made in terms of section 44(1) of the ECA impose a broad range of obligations for access broadly, which also apply to the wholesale broadcasting transmission markets, including the obligation to:

- negotiate in good faith;
- maintain supply;
- specify technical requirements;
- abide by fairness conditions
- abide by reasonableness conditions (technical and financial feasibility, and promotion of the efficient use of electronic communication networks and services)
- meet designated timelines.

The Authority is of the view that the existing Facilities Leasing Regulations which apply to the provision of facilities broadly can be used to promote the self-provisioning and leasing of wholesale broadcasting transmission facilities and services that fall within the scope of the markets as defined. This would additionally cover the markets for access to masts and sites for the purposes of self-providing wholesale broadcasting transmission. The Authority is of the view that in light of the information obtained through the questionnaire and evidence presented to the Authority during industry interviews, the timeframes for provision of access and the finalisation of agreements could be a challenge for new entrants and smaller broadcasters. There is no evidence of the broadcasting sector having used these regulations to request access, or to address any problems that may have arisen from accessing MTS, such as agreement terms and conditions, quality of service requirements, Service Level Agreements (SLAs) and disputes. The Authority thus proposes ensuring awareness by broadcasting licensees of the Facilities Leasing Regulations, and reinforcing the access obligations set out in the regulations. It is the Authority's view that this approach would be appropriate and proportionate to address the concerns raised relating to access.

6.5.2 Transparency obligations, specifically an obligation to publish a Reference Offer

Imposing an ex ante obligation of transparency as provided for in terms of section 67(7) (d) and (e) of the ECA can be used in relation to addressing potential problems in the defined markets. Section 45 of the ECA provides,amongst others, transparency related obligations; concluded agreements must be made public. This acts as a constraint to anti-competitive behaviour which might otherwise emerge such as delaying tactics, refusal to deal and discrimination.

It is necessary to avoid the effects of inefficiencies at the level of the SMP Operator, the impact of delaying tactics and disputes. It is furthermore critical to ensure that broadcasters seeking access to MTS do not have their costs unduly raised through the behaviour of a SMP Operator. As such, the Authority considers that it may be beneficial to the market for SMP Operators to publish a standard Reference Offer for MTS within a reasonable period (e.g. 3 months) after the finalisation of any regulations that may result from any ensuing process.

A requirement to publish a Reference Offer serves two key purposes – assisting with transparency so that potential anti-competitive behaviour can be more effectively monitored; and making clear and available the terms and conditions on which other providers will purchase upstream inputs. Effectively, the Reference Offer will ease market entry through facilitating quicker negotiations, avoiding disputes on standard terms, and providing new entrants with confidence in terms of the access, quality and pricing that they receive from the SMP operator. This in turn improves competition in the market as well as the relevant upstream markets.

In light of the definition proposed in the Discussion Document of managed transmission services which includes all of the equipment (other than masts) which is used by signal distributors to transmit the broadcast signal (i.e. transmitter, combining unit, feeder and antenna) received via the satellite distribution network, charges under the Reference Offer must be sufficiently unbundled to discourage tying and bundling so that facilities seekers are not required to pay for facilities or services that are not necessary for managed transmission services. At a minimum, the Authority proposes that an operators' Reference Offer must include a description of:

- the relevant facilities and services on offer;
- the associated terms and conditions, including charges, ordering, billing and dispute resolution processes;
- technical issues;

- access requirements to allow for the installation and maintenance of broadcasting transmission equipment and related equipment (by the licensee or by third parties);
- access to allow for the connection of such equipment for power or other essential services;
- access to and use of broadcast equipment that can be shared such as data lines, transmitters and feeders; and
- Terms relating to maintenance, quality and safety standards including Service Level Agreements and standards.

The Authority is cautious about imposing regulation in a heavy handed manner. The Authority believes that the Reference Offer obligation is not overly burdensome since the SMP Operator must prepare facilities leasing agreements in the form of Master Signal Distribution and other agreements in any event. They also are likely to have existing price lists for MTS in place. The requirement relates to the standardisation and publication of same. It provides that the SMP Operator advise potential facilities seekers of the terms on which services are expected to be commonly provided and will ease the provision of access by the SMP operator. A benefit of this for the SMP Operator is that it may encourage the use of its facilities and increase the effective use of assets.

The Authority's thinking is that the Reference Offer will include reference to proposed charges for different elements of network access, which charges should be cost oriented. The charges for the provision of managed transmission services must be reasonably derived from the cost of provision.

Questions on Transparency

22. Do the existing Facilities Leasing Regulations adequately address the potential challenges with respect to entering into a Master Service Agreement with Sentech?
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)?
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?
25. Is the proposed Transparency Obligation appropriate, proportionate and justifiable?
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?
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?

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?

6.5.3 Non-discrimination obligations, including non-discrimination on quality and pricing

A non-discrimination obligation as provided for in section 67(7)(c) of the ECA requires an SMP Operator to apply equivalent conditions in equivalent circumstances to competitors that provide equivalent services, and provide services and information to others under the same conditions and of the same quality as it provides for its own services, or those of its subsidiaries, partners or affiliates. A non-discrimination obligation requires that third party access seekers are treated in a similar manner and no less favourably than the SMP operators' internal divisions.

Section 43(7) of the ECA and the Facilities Leasing Regulations also provide for non-discrimination with respect to the leasing of facilities (broadly). Section 43(7) provides that:

> *"The lease of electronic communication facilities....must, unless otherwise requested by the leasing party, be non-discriminatory as among comparable types of electronic communications facilities being leased and not be of a lower technical standard and quality than the technical standard or quality provided by such electronic communications network service licensee to itself or an affiliate"*

The manner in which the Authority proposes imposing a non-discrimination obligation is through enforcement of the Facilities Leasing Regulations coupled with a (transparency) requirement for operators with SMP in the defined markets to be required to prepare and make available an MTS Reference Offer.

6.5.4 Non-Discrimination on Quality

The non-discrimination obligations include non-discrimination on quality. It is important that the SMP provider of MTS provides such services at an agreed standard. Through anecdotal evidence and interviews it has become clear that some of the smaller broadcasters have concerns relating to the SLA with Sentech. The Authority proposes including a standard SLA in the Reference Offer. This will promote both transparency and non-discrimination.

6.5.5 Non-Discrimination on Pricing

The non-discrimination obligations set out in existing regulations and legislation do not create any obligations with respect to pricing. The proposed obligations arising from this market review complement the existing framework in that they include non-discrimination obligations with regard to pricing. The Authority understands that volume based discounts may be provided, and does not seek to prevent this commercial behaviour if it is done in a fair and transparent manner. Non-discrimination on pricing can be enforced through inclusion of price lists in the Reference Offer.

Questions on Non-Discrimination
29. Is the proposed Non-Discrimination Obligation appropriate, proportionate and justifiable? Please explain your views?
30. Are there other areas in addition to pricing and QoS whether there are concerns relating to non-discrimination?
31. Should existing agreements be amended; and, if so, how?

6.5.6 Price control Obligation

Section 67 of the ECA allows for the Authority to impose price control obligations in markets where ineffective competition has been found. The ECA provides that the Authority may impose *"such price controls, including requirements relating to the provision of wholesale and retail prices..."* Price Control obligations can range from light (e.g. an obligation that prices are fair and reasonable) to heavy (e.g. an obligation that prices are cost oriented or cost-based).

In a competitive market,pricing for MTS would in all likelihood be cost-reflective; this is due to the presence of effective pricing constraints that would be in place in light of competition. In order to prevent the risk of excessive pricing that exists in a market with insufficient competition, one of the potential consequences of SMP, the Authority's initial view is that it may impose requirements regarding the recovery of costs and may require that the charges for MTS and network access be cost oriented.

6.5.7 Approaches to imposing a price control obligation

Any wholesale price control mechanism that the Authority adopts will have to promote efficiency in a sustainable manner which does not distort the market. ICT regulators control the prices in markets where there appears to be an access bottleneck due to the

existence of market power according to the costs that an efficient operator employing the latest available technology would incur. In arriving at the costs of an 'efficient operator', the Authority is aware of the need to balance the needs of the public and end users who seek high quality services at reasonable and affordable rates with those of operators who need to achieve a suitable rate of return on their investment. Any proposed "efficient charge" that the Authority could set would have to take into account these considerations.

There are different forms of wholesale price control possible to try to determine what an appropriate and efficient charge would be. Various approaches have been adopted globally including:

- At cost orientation using cost information;
- A price cap regime, where the prices of an SMP operator are regulated but the operator is rewarded for becoming more efficient; and
- At a benchmark level (using relevant benchmarks appropriate to a given country);

The approaches set out above are not mutually exclusive. The Authority notes that cost orientation is best achieved using information obtained through a cost model. The Authority has to date not created a cost model that would enable it to accurately estimate MTS prices, nor did Sentech provide sufficient information in response to the industry questionnaire to conduct proper cost analysis. As a future remedy, the Authority could impose a regulatory accounting requirement to enable it to gather information for use in the next review of these markets. However, the Authority believes that setting such an obligation at this stage would be a burdensome approach, and may not be proportionate. Instead, in the absence of cost information obtained from the industry, the Authority is reluctant to set a specific price, but seeks to take into account market developments by requiring that:

- Pricing in the digital transmission era cannot be any higher than existing contracted pricing for analogue transmission services and should be expected to be lower (given the greater efficiency of the spectrum use). New MTS agreements be negotiated further to the publication of the MTS Reference Offer which includes standard pricing

In light of the numerous facilities and services included under MTS (i.e. signal distribution, maintenance, installation etc) the Authority could approach this obligation in a number of ways:

- On one hand, the Authority could deal with the pricing of each specific service provided as part of the managed service separately; or
- it could require that the MTS charge be reasonably derived from the costs of provision, as has been done in other jurisdictions.

The Authority is of the view that in light of the information available to it and bearing in mind the characteristics of the market, the latter approach is preferred. It guards against SMP operators raising prices to levels that were not reflective of costs and offers a basis for investigating such prices in the event of necessary regulatory intervention. It is proportionate as it is confined to the MTS and it furthermore ensures that Sentech may allow for the realistic costs of provision to be accounted for when setting prices and does not exclude them from making flexible pricing decisions where objectively justified.

In addition to imposing a pricing obligation, the Authority considers that it may be worthwhile to put in place measures to ensure that licensees can appeal a proposed price, should they have information to indicate that it is excessive. Under an appeals mechanism, the Authority can address the complaint through existing processes.

Questions on Price Control Obligation

32. Is the proposed Pricing Obligation appropriate, proportionate and justifiable?
33. Do you agree with the 'light touch' approach that the Authority proposes relating to cost orientation?
34. Do you believe that a Regulatory Accounting obligation would be proportionate to the harm that the remedy seeks to address?
35. Should existing agreements be considered for amendment with respect to price? Please provide justification in support of your view?

7 APPENDICES

7.1 Appendix A: Summary of the steps needed to define a market

The first step is to outline the services to be considered relevant for a market definition process from a functional and geographic perspective.

A relevant product market comprises products or services that are sufficiently substitutable. An assessment of demand-side substitutability is the starting point for the definition of a relevant product market. It is also relevant to assess whether substitutability exists on the supply side of the market.

Demand-side substitutability exists when two or more products in the market are, in the perception of the end user, mutually exchangeable or substitutable on the basis of certain characteristics (such as price and the utility they provide to the end-user).

Supply-side substitutability exists when providers of other (non-substitutable) products, as a response to a small price change in the short term, can change their production or distribution and offer substitutable products without incurring significant additional costs or substantial risk.

An acknowledged method of analysing substitutability is the so-called 'hypothetical monopolist test'. The aim is to find the best-defined market in which a hypothetical monopolist is able to exercise market power. The test is done on the basis of a small but significant (in practice 5-10 %) and non-transitory increase in price (SSNIP) for the relevant product, based on the assumed price level in a market with effective competition. All other prices are assumed to be unchanged. Then one assesses the effect of the price increase in the relevant market and assesses the total effect on the producer's revenue as a result of the price increase.

The method depends on a significant amount of data that will often be difficult to produce. Alternative approximation methods may therefore also be applied.

The hypothetical assessment should be supplemented by actual information on behaviour on the supply and demand sides to the extent that such information is available. On the demand side, allowance should be madefor such factors as an end users' access to information, switching costs and other lock-in mechanisms. On the supply side, account should be taken of the actual potential a provider has to change

production as well as any regulatory conditions that prevent market entry by competitors in the market.

Once the relevant product markets have been identified the next step is to define the geographic market. The outer geographic borders for the relevant product market will generally be determined by the extent of the network and the jurisdiction of the legal regulation of the market. The extent to which a more detailed geographic definition of the market has to be carried out will rest on an assessment of the substitutability of the relevant products and services on the supply and the demand side, using the Hypothetical Monopolist test, as described above.

The relevant geographic market is that area in which the relevant products and services are provided on sufficiently similar or homogeneous competitive terms. In assessment of substitutability on the demand side it is important to take account of preferences and geographic purchase patterns, if such information is available. With this as the basis the markets can be defined regionally within the national frontiers, nationally or trans-nationally. Given jurisdictional issues, the Authority can only define regional or national markets.