

5.3.3 Existing Digital Broadcasting Satellite Model in South Africa

Currently, the only digital broadcasting services (excluding, alternative platforms such as 3G used for digital broadcasting) available commercially in South Africa are those operated on satellite platforms using the DVB-S standard. These digital broadcasting services operated under a deemed permission to continue until ICASA either refused or granted an application for a licence in terms of section 4 of the Broadcasting Act prior to the commencement of the ECA. In terms of the transitional provisions in the ECA this “permission to continue” remains in effect until ICASA has dealt with the licence applications made by these broadcasting services. Section 4(3) of the Broadcasting Act provided that any licensed broadcasting service who provided a service consisting of more than one channel may not include a channel in such a service unless ICASA had authorised the channel. Section 4(4) then required ICASA to prescribe the procedure and the appropriate conditions for the authorisation of channels. These provisions on authorisation of channels were technology, platform and service agnostic, in other words in practice they did not distinguish between analogue or digital, they did not distinguish between terrestrial or satellite and they did not distinguish between FTA and subscription.

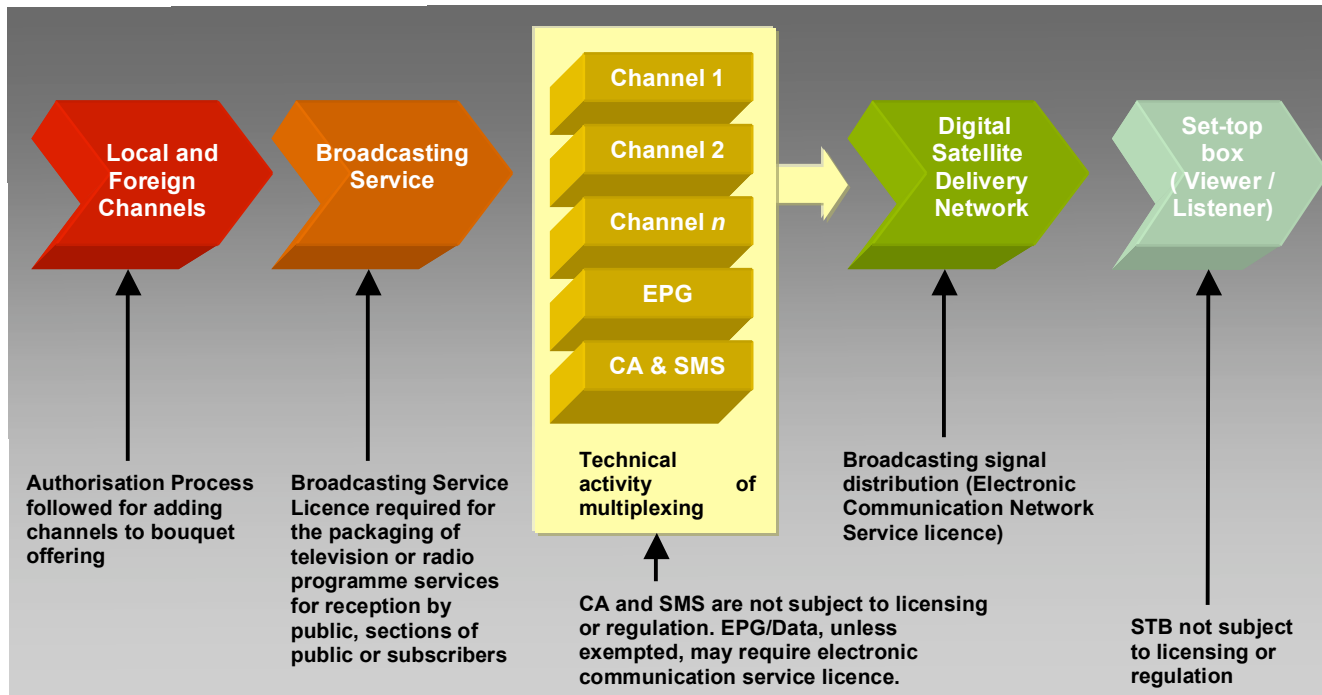
ICASA dealt with the requirement to prescribe a procedure for the authorisation of channels in the Subscription Broadcasting Regulations, 2006, but in terms of section 4(4) prior to the commencement of the ECA they could also have made this procedure applicable to FTA channels as provided by on the Vivid satellite platform operated by Sentech. Section 4 has been repealed in its entirety by the ECA, but the Subscription Regulations remain in effect and the ability for ICASA to continue with this regulatory approach is consistent with the ECA.

The satellite digital broadcasting value and licensing chain which commenced in terms of the previous licensing regime set out in the Broadcasting Act and the IBA Act and which is now being continued in terms of the ECA is set out in Figure 10 below. Local and Foreign channels are authorised by ICASA for carriage on the broadcaster’s bouquet offering to audience and/or subscribers and the broadcaster is licensed to package television or radio programme services for reception by the public, sections of the public or subscribers. In some cases the technical activity of multiplexing⁷³ is performed by the broadcaster and in other cases by the broadcasting signal distributor. However as the technical activity in terms of combining channels, EPG and CA does not fall within the legal definition of broadcasting service or broadcasting signal distribution (Electronic Communication Network Service) this can be dealt with as commercial decision to keep in-house, place with the broadcasting signal distributor or even outsource to a third party. Although, it should be kept in mind that inclusion of data services and even the EPG may require an Electronic Communications Service licence unless an exemption is granted by ICASA in terms of section 6 of the ECA. Once the multiplexing activity is completed the content is handed over to the broadcasting signal distributor in its final form for distribution on an electronic communications network. In terms of previous legislation and now the ECA, the Electronic Communications Network Service (broadcasting signal distribution) aspect of the value chain would require a licence. In terms of the ECA both the broadcasting service and the electronic communications

⁷³ Multiplexing has been defined by the ITU-R as being “A reversible process for assembling signals from separate sources into a single composite signal for transmission over a common transmission channel. This process is equivalent to dividing the common channel into distinct channels for transmitting independent signals in the same direction”. Recommendation ITU-R V.662-3 (2000) – Ap. 2, 71(3.11)

network service licensees are required to apply for the radio frequency spectrum licence on which the service is offered/carried.

FIGURE 10: SATELLITE DIGITAL BROADCASTING VALUE CHAIN AND LICENSING



The reason for highlighting this value and licensing chain is that it does provide a working multi-channel model of Digital Broadcasting in South Africa as regulated by ICASA and operated by Sentech, MultiChoice and any new subscription broadcasting services that will be entering the market in response to the Invitation to Apply (ITA) for satellite and cable subscription broadcasting licenses issued by ICASA in 2006. In addition, as the ICASA Subscription Broadcasting Regulations, 2006, were drafted in a technologically neutral fashion it is also the model that would be applied to the licensing and regulation of subscription broadcasting services operating on a digital terrestrial platform.

5.3.4 New Legislative Framework and Digital Broadcasting Licensing

One of the issues which the WG had to consider is whether the ECA⁷⁴ will be able to cater for the transition from analogue to digital broadcasting. The focus in this regard has mainly been on DTT and DAB-T, as the process for digital broadcasting on satellite and cable has been made clear by ICASA in the position paper and regulations on subscription broadcasting.

The ECA establishes a framework for regulatory intervention to promote South Africa's national policy objectives for the electronic communications industry and seeks to provide a generic set of regulatory provisions based on generic definitions of market and service activities and services. Critical objectives in this regard touched upon in section 2 of the ECA which have to be kept in mind when ICASA conducts licensing processes are, amongst others:

⁷⁴ The Act commenced on 19 July 2006.

- to promote and facilitate convergence of telecommunications, broadcasting, information technologies;
- to promote and facilitate the development of interoperable and interconnected electronic networks, the provision of services contemplated in the Act and to create a technologically neutral licensing framework (own emphasis added);
- to encourage investment and innovation in the communications sector;
- to ensure efficient use of the radio frequency spectrum; and
- provide access to broadcasting signal distribution for broadcasting and encourage the development of multi-channel distribution systems in the broadcasting framework;".

The licensing provisions under the ECA were designed to allow flexibility with respect to licensing structures as the licensing requirements vary over time with the evolution of the electronic communications industry. The intention behind this legislation is that as the industry evolves towards convergence, licences under the ECA should be formulated to be both technology and service neutral. The idea was that a licensing regime, similar to the Malaysian model, should allow a licensee to undertake activities that are market specific without being bound to platform as convergence facilitates delivery via multiple delivery platforms (e.g. terrestrial frequencies, satellite, fixed line, broadband cable and wireless broadband). This creates opportunities for expansion into the industry and provides for a more effective utilisation of network infrastructure.

Under the ECA, there are four categories of licensable activities:

- **Electronic Communication Network Services** – this is the making available whether by sale, lease or otherwise of an electronic communications network which would consist of electronic communication network facilities such as satellite earth stations, broadband fibre optic cables, telecommunications lines and exchanges, radio communications transmission equipment, mobile communications base stations and broadcasting transmission towers and equipment. These facilities are the fundamental building block of the convergence model upon which electronic communication services and broadcasting services are provided.
- **Electronic Communication Services** – is any service provided which consists of the conveyance of electronic communications over an electronic communications network, excluding broadcasting services. This would most likely capture services that provide particular functions such as voice services, data services and content-based (excluding broadcasting) services to end-users.
- **Broadcasting Services** – which is any service which consists of broadcasting (unidirectional electronic communications to the public) and which service is conveyed by means of an electronic communications network.
- **Radio Frequency Spectrum** – which is a licence aimed at authorising the user to use radio frequency spectrum. To the extent that any service licence mentioned above entails the use of radio frequency spectrum, a radio frequency spectrum licence is required in addition to the service licence.

Within the licensable activity categories of electronic communication network services, electronic communication services and broadcasting services, there are two key types of licences:– i) individual licences which allows close monitoring and control of activities; and ii) class licence which is a “light-handed” form of regulation which is designed to promote industry growth and development by removing unnecessary regulatory barriers. Standard licence conditions apply to both individual and class licence and these

conditions are set out in Chapter 3 of the ECA although ICASA is empowered to add these standard terms through regulations. Special or additional licence conditions may be imposed. Unlike an individual licence, a class licence merely requires registration, which is an administrative process. In terms of section 6 of the ECA, ICASA has the ability to exempt certain electronic communication networks, electronic communication services and radio frequency spectrum from requiring licensing or registration.

In keeping with the spirit and intention of the ECA to create a technologically neutral licensing framework it is proposed that in approaching the licensing of broadcasting services in South Africa, ICASA should issue individual and class broadcasting service licenses that are not bound to a specific delivery platform. Such an approach would preclude the possibility of ICASA having to licence the same operators over and over again in a converged environment each time the operator offers their broadcasting service on a new delivery platform.

In considering the licensing of DTT Broadcasting Services and Digital Audio Broadcasting Services (Terrestrial) in terms of the ECA the following components of the digital broadcasting value chain that may be dealt with have been identified:

- Authorisation of channels
- Broadcasting Services;
- Multiplexing
- Broadcasting Signal Distribution;
- Radio Frequency Spectrum; and
- STB (see Figure 8 for the ECA compliant Broadcasting Licensing Model and Value Chain).

(a) *Authorisation of Channels*⁷⁵

In respect of channel authorisation, ICASA has already put in place platform neutral regulations for the authorisation of channels (local or foreign) for subscription broadcasters. This was done in part to meet the requirements of section 4(4) of the Broadcasting Act, which has subsequently been repealed by the ECA. These regulations, however, remain in effect in terms of section 95 of the ECA and consequently any subscription broadcasting services offered on DTT (DVB-T/H standard) and / or Digital Terrestrial Radio (T-DAB, T-DMB, DRM standards) would have to follow the channel authorisation process prescribed in the ICASA Subscription Broadcasting Regulations, 2006.⁷⁶

However, ICASA did not at the time it dealt with subscription broadcasting prescribe the procedure and the appropriate conditions for the authorisation of channels carried by a FTA broadcaster. The WG holds the view that there is no requirement that the authorisation process for FTA broadcasting be the same as for subscription broadcasting. In fact ICASA itself in the Subscription Broadcasting Position Paper, when dealing with the question of Open Windows, stated that it has “...decided that there is the need for a clear regulatory distinction between FTA broadcasting and subscription broadcasting”.⁷⁷

⁷⁵ In terms of the ECA a “channel” means a single defined programming service of a broadcasting service licensee. It is clear therefore that a channel is not a broadcasting service licensee, but a programming service carried by such a licensee.

⁷⁶ There is no need to amend the ECA to reflect a similar provision to the one which was repealed in the Broadcasting Act, as both Chapter 2 and 3 of the ECA create sufficient scope for ICASA to prescribe such regulations in terms of the broad regulatory powers given on licensing matters.

⁷⁷ Independent Communications Authority of South Africa. Subscription Broadcasting Services: Position Paper (Johannesburg: ICASA, 2005) p.66

This sentiment was repeated in the Position Paper with even more clarity, in regard to limitations on ownership and control, where it was stated that:

“The limitations are, however, more justifiable when imposed on terrestrial FTA broadcasting services. The Authority’s Triple Inquiry Report proposed that subscription broadcasting services should be more lightly regulated than terrestrial FTA broadcasting services. Although the proposals were made in relation to the imposition of South African content quotas, the same argument could be made for the regulation of subscription broadcasting services in general. The distinction between FTA broadcasting services and subscription broadcasting services is an important distinction.”⁷⁸

This statement clearly indicates that terrestrial FTA broadcasting services should have a higher level of regulation than subscription broadcasting.

RECOMMENDATION:

The WG therefore makes the following recommendations, namely that:

1. ICASA conduct an inquiry to determine how many channels the market can sustain rather than simply introduce channels based on the technical capacity of the terrestrial digital transmission networks.
2. ICASA consider two options, the first being authorising channels in the same manner that it does for subscription broadcasting services and the second being to develop regulations for the authorisation of any terrestrial broadcasting services which attract advertising, in a manner that puts in place a more rigorous procedure than the procedure in place for cable and satellite subscription broadcasting.

DISSENTING VIEW:

M-net and Orbicom expressed a slightly different view on recommendations 1 and 2 above. It was pointed out that section 60(4) of the ECA already articulates a policy on advertising carried by subscription broadcasting services and that ICASA already has conducted an inquiry on subscription broadcasting, which resulted in a technological neutral approach to subscription broadcasting services. It is therefore suggested, that the market study and the regulations contemplated above be limited to FTA broadcasting services on the terrestrial digital broadcasting platform.

78 Id. pp. 70-71

(b) *Broadcasting Services*

The following definitions in the ECA and the related legislation are relevant when considering Broadcasting Services.

A broadcaster is defined as follows in the Broadcasting Act:

“broadcaster” means any legal or natural person who composes or packages television or radio programme services for reception by the public or sections of the public or subscribers to such a service irrespective of technology used;”

This definition of a broadcaster is very clear and technology neutral and is very applicable to a digital broadcasting environment where broadcasters either compose or package channels for multi-channel broadcasting. The definition of broadcaster introduces the concept of television and radio programme services, which may be defined by ICASA in more detail in regulations once the process of digital switchover commences. However, it is interesting to note that the ECA defines a channel as follows:

“channel” means a single defined programming service of a broadcasting services licensee;”

The implication of this definition is that it appears a broadcasting service licensee may have a number of channels that consist of defined programming services, whether television or radio. Once again this is a definition that appears to be technologically neutral and can be applied to a digital multi-channel broadcasting environment.

It is necessary from the preceding definitions to also consider what constitutes a broadcasting service that will need to be licensed in terms of chapter 3 of the ECA:

“broadcasting service” means any service which consists of broadcasting and which service is conveyed by means of an electronic communications network, but does not include—
(a) a service which provides no more than data or text, whether with or without associated still images;
(b) a service in which the provision of audio-visual material or audio material is incidental to the provision of that service, or
(c) a service or a class of service, which the Authority may prescribe as not falling within this definition;”

Once again the definition is technology neutral and will remain applicable in a digital broadcasting environment. It is also interesting to note that a datacasting service, namely data or text, would not fall within the broadcasting service licence and would require either a separate electronic communications service licence or perhaps a blanket exemption for broadcasting services from applying for an electronic communications service licence in terms of section 6 of the ECA based on, perhaps, a specific capacity limit.

This need for a separate electronic communications service licence is also highlighted when one considers other definitions which are core to the provision of a broadcasting service. The act of broadcasting, for example, is defined as follows in the ECA:

“broadcasting” means any form of unidirectional electronic communications intended for reception by—
(a) the public;
(b) sections of the public; or
(c) subscribers to any broadcasting service,
whether conveyed by means of radio frequency spectrum or any electronic communications network or any combination thereof, and
“broadcast” is construed accordingly;”

Essentially this means that broadcasting is limited to unidirectional electronic communications, this means that bi-directional electronic communications would not be captured by the definition. Electronic communications, in contrast, is defined in the ECA as being:

“electronic communications” means the emission, transmission or reception of information, including without limitation, voice, sound, data, text, video, animation, visual images, moving images and pictures, signals or a combination thereof by means of magnetism, radio or other electromagnetic waves, optical, electro-magnetic systems or any agency of a like nature, whether with or without the aid of tangible conduct, but does not include content service;”

So to the extent that a service being provided by a broadcaster to the public, sections of the public or subscribers does not fall within the definitions of broadcasting and broadcasting service, but does fall within the definition of electronic communication it would constitute an electronic communications service, as defined in the ECA:

“electronic communications service” means any service provided to the public, sections of the public, the State, or the subscribers to such service, which consists wholly or mainly of the conveyance by any means of electronic communications over an electronic communications network, but excludes broadcasting services;”

The WG has formed the view that no amendment of the ECA is required in respect of the licensing of multi-channel broadcasting services, as the ECA already contemplates a situation where a broadcasting service can consist of multiple programming services known as channels.

In respect of digital television, where unlike digital radio a switchover process is contemplated, it is acknowledged that existing broadcasting licensees have acquired rights to use the analogue frequencies assigned to them in their licences, and that digital switchover will require these television broadcasting services to surrender these analogue frequencies licensed to them by ICASA. A change of this nature and scope will require that the existing television broadcasting service licenses are either amended or converted on no less favourable terms. This essentially means that when the basket of analogue frequencies currently possessed by incumbents is surrendered to ICASA, the individual broadcaster should at very least have enough frequencies assigned to

it for provision of one national digital network.⁷⁹ If for example, two existing broadcasters were migrated across as channels on the same digital network it would not be considered to be favourable terms as there would be a loss of brand identity and a lack of frequency rights normally associated with such brand.

RECOMMENDATIONS:

The WG makes the following recommendations, namely that:

1. When migrating television broadcasting service licensees from analogue transmission networks to digital transmission networks, each licensee should be left, after it surrenders its analogue frequencies to ICASA; with at least sufficient frequencies to establish a single digital transmission network with similar coverage to its existing analogue broadcasting service;
2. in terms of practical implementation, ICASA can deal with television broadcasting licensees' rights and obligations as providers of digital terrestrial broadcasting services when converting their licences in terms of section 93 of the ECA to technology neutral broadcasting service licences and ICASA may also have to amend the individual broadcasting service licences to deal with any transitional arrangements (e.g. surrender of analogue frequency spectrum at switch-off) pertaining to the digital migration; and
3. ICASA should conduct an inquiry into Digital Broadcasting to provide urgent guidance on the licensing of FTA digital radio:
 - in Band III and L-Band using T-DAB, T-DMB,
 - in MF bands using DRM, and
 - on alternative broadcasting platforms, such as satellite.

DISSENTING VIEW:

Sentech has placed on record its dissenting view to recommendations 1 and 2 above, namely that in a digital environment, frequencies must be assigned to the Electronic Communication Network Service licensee instead of the broadcaster. The assignment of frequencies to broadcasters in a digital environment will inhibit the process of migration and the freeing up of spectrum which is a scarce resource. Sentech has reserved its rights in regards to legal interpretations of the ECA made by the WG throughout this report.

Orbicom shares the Sentech view that frequencies should be assigned to the Electronic Communication Network Service licensee instead of the broadcaster in a digital environment. However, Orbicom expressed no views on the interpretation of the ECA in this regard.

⁷⁹ The ECA provided that when converting licences ICASA could not include monopoly or exclusionary rights, however it was made clear in section 93(8) that radio frequency spectrum for the purposes of this sub-section was not to be considered a monopoly or exclusionary right. In other words ICASA when converting licences in terms of the ECA can not deprive any licensee of their existing rights to radio frequency spectrum.

c) *Multiplexing and STBs*

The activity of multiplexing in the context of digital broadcasting can be described as the combining of multiple television and/or sound programming services and data streams together with an embedded EPG, CA and SMS into a single complex signal that can be handed over to the network operator for the purposes of transportation to the viewer/listener. It is helpful to examine this activity and the STBs against the background of the South African regulatory environment. ICASA in the Subscription Broadcasting Position Paper stated:

“The Authority has decided to follow international best practice principle of technological neutrality. The Authority has also decided not to regulate API, EPG and SMS. The Authority will also not mandate a CA standard for broadcasting platforms.

The Authority is aware of the need to be flexible and to have policy and regulations that, while protecting the consumer, allow innovation and creativity to flourish and business to grow by, amongst other things, not implementing rules and procedures which may inhibit as yet unforeseen developments. The Authority would, however, like to encourage interoperability of the STBs and also encourage the industry to work together in finding ways to develop standards that permit different CA systems to inter-operate on the same broadcasting platform, without compromising the commercial integrity of broadcasting operations.”⁸⁰

It is clear from this statement that ICASA would prefer that the industry adopt a self-regulatory approach to developing standards for STBs and multiplexing to encourage the ability to interoperate on the same platform. It is also clear that those aspects of multiplexing that involve the inclusion of embedded data streams would not fall under the broadcasting service licence, but would require an electronic communications service licence.

Datacasting is a transmission mode that allows broadcasters to deliver information in a variety of formats to digital television sets and computers. Broadcasting Services that choose to datacast will be able to send information either alone or in conjunction with audio or video transmissions. The information transmitted could be, amongst others, stock quotations, sports statistics, government information, weather updates, information to accompany video programming, and educational materials to be used with instructional programming, among other possibilities. Datacasting also makes interactive television feasible. Viewers can engage with programming that is pushed at them in the traditional fashion, but also with information content that they can pull out of the digital transmission.

Datacasting can also serve a variety of government and public interest needs as local government often has information that can be delivered by means of datacasting to the benefit of citizens. Datacasting of public interest information should not impose an undue compliance burden on broadcasting services as such information does not consume much bandwidth, it could amount to less than 1% of the frequency spectrum allocated to a broadcasting service for use as a digital broadcasting multiplex.

⁸⁰ Id, p.71

In the United Kingdom (UK) the legislative context for data limits are set out in the Broadcasting Act 1996. In the UK, digital terrestrial television (DTT) services, are transmitted on DTT multiplexes. These multiplexes are licensed by Ofcom under the Broadcasting Act 1996 or, in the case of multiplex 1, granted by the Government to the BBC. The multiplexes licensed by Ofcom are subject to a 'data limit' - in essence no more than 10% can be used for non-TV services. The policy purpose of data limits are to ensure that DTT multiplexes are used mostly for television, and are not taken over by data distribution or other communications services. Parliament in the UK saw this as an important principle, and one that also applies (though with different limits and definitions) to digital radio multiplexes. In the Radio Review published in October 2005, Ofcom suggested that the data limit applied to radio multiplexes could be relaxed somewhat to encourage innovation and competition in digital broadcasting. In April 2006 the Department for Culture, Media & Sport (DCMS) published a consultation paper which considered raising this limit from +20% to 30%. Ofcom in June 2006 started a similar consultation to provide guidance on data limits currently applied to DTT multiplexes.⁸¹

In the UK, the legislation reserves at least 90% of the capacity on each of the multiplexes licensed by Ofcom for specific types of programme services. At present these are defined to include:

- **qualifying services** - Channel 3, Channel 4, Channel 5 and S4C. Note that for the purposes of section 12 of the 1996 Act, qualifying services do not include the digital public teletext service;
- **digital television programme services** - these are services consisting wholly or mainly of images capable of being seen as moving pictures ("normal" TV channels), either licensed by Ofcom under a Digital Television Programme Service (DTPS) licence, or provided by a broadcaster with an equivalent authorisation from another EU Member State, or provided by the BBC under the Charter. They do not include qualifying services or the digital public teletext service. The definition of DTPS also includes subtitling and audio-description services, promotion and listing of the DTPS and other services which are ancillary and directly related to the DTPS. Examples of such services are interactive and explanatory material associated with a programme, for example material accessed through the 'red button'. Such material can be of all kinds – text, still images and graphics as well as moving pictures and sound - and may be available for a period before and after the broadcast programme service. In this case it may be accessed via a more generic interactive menu rather than the 'red button' whilst the programme is broadcast. However, it must still be directly related to the contents of the programme;
- **digital sound programme services provided by the BBC** - The legislation sets out that BBC radio services are included in the 90%, but commercial radio services are not;
- **programme-related services** - are 'ancillary and directly related to' a programme service. Promotion and listing of programme services includes the provision of EPG, which are a critical part of the digital television experience. The availability of an EPG is a key benefit which

⁸¹ Office of Communications [UK]. Data limits on Digital Terrestrial Television Multiplexes – Consultation on Draft Guidance (London: Ofcom, June 2006) pp.3-5

viewers gain from the switch to a digital service. The information needed to populate the EPG is thus considered as a programme-related service rather than as “data”,⁸² and

- **relevant technical services** – these are data streams used for encryption purposes and associated with conditional access services.⁸³

Services that cannot be included in the 90% are:

- the public teletext service;
- interactive services, for example games, which are not directly related to a licensed programme service or its listing or promotion;
- any service which is licensed as a Digital Television Additional Service unless it is a programme-related service;
- any service which consists exclusively of advertising, even if it is directly related to the contents of a shopping channel for example; and
- any technical service that is not a relevant technical service.⁸⁴

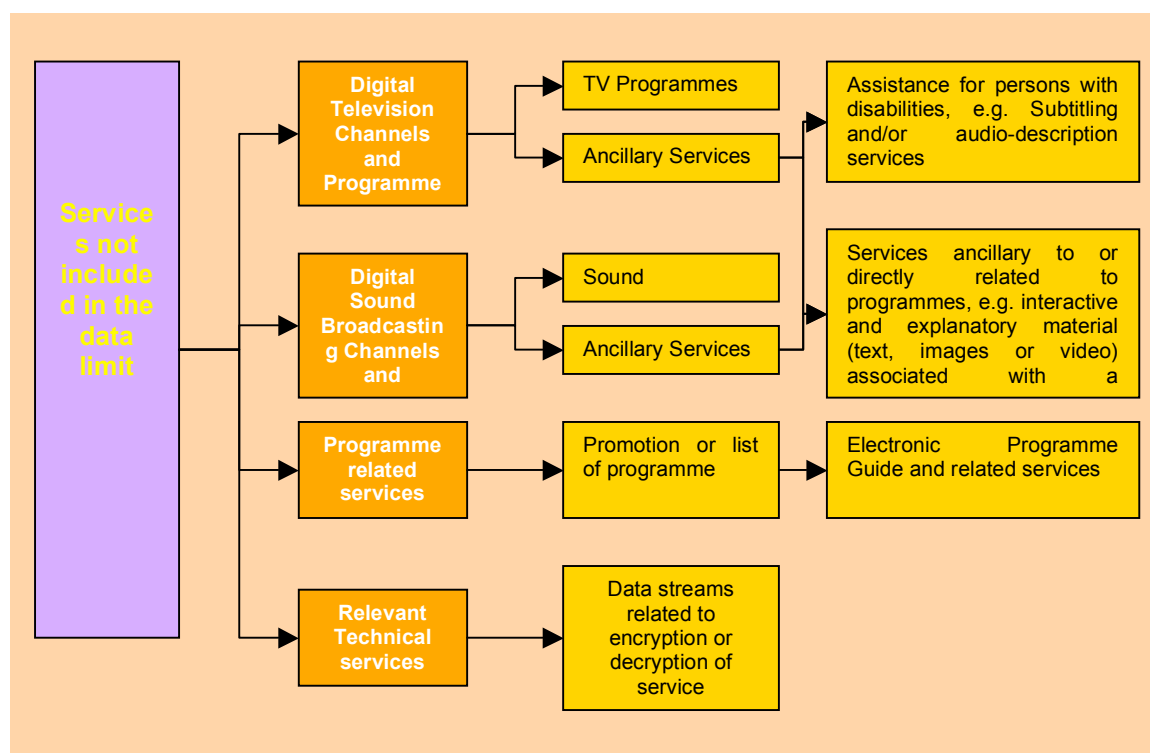
The WG hold the view that the policy principle that frequencies are reserved for television and radio broadcasting services usage is a sound one, as it precludes the frequency network on which a broadcasting service is based from changing from a broadcasting primary focus to a communication service and/or data distribution primary focus to the detriment of the public interest broadcasting objectives government is seeking to achieve. In view of the review on data limits taking place in the UK, the WG proposes that a 20% data limit be imposed on frequencies used for DTT and digital radio transmission networks and that Broadcasting Service licensees be exempted in terms of section 6(1)(a) of the ECA from having to apply for a separate Electronic Communication Service Licence for such services as they are not a primary service on the digital television or radio broadcasting service. It is proposed that in line with the UK case study, broadcasters be responsible for the monitoring of the compliance with data limits and that ICASA conduct random audits from time to time to verify the accuracy of the broadcaster’s reports. It is further proposed that Digital Television Channels and Programmes, Digital Sound Broadcasting Channels and programmes, Programmes related services and Relevant Technical Services should not be included in the calculation of the data limit (see Figure 11 for a diagram setting out the proposal visually).

82 In the UK each DTT multiplex carries its own EPG information, but also cross-carries that for the other multiplexes. This is an effective way to ensure that all viewers, whichever multiplex they are watching, receive EPG information about the whole DTT services. The whole of the cross-carried EPG information should be considered as programme-related services rather than as “data”.

83 DTT multiplexes carry a number of streams of data to allow the management of the multiplex. These include Service Information (SI), Programme Specific Information (PSI) and Packet Identifiers (PIDs). All of these are invisible to end-users and perform a purely technical function in allowing the component programme streams multiplexed together to be unpacked and delivered to the user. The multiplex could not exist without these data streams. Together they represent some hundreds of kbps on each multiplex. Ofcom proposes to ignore the SI, PSI and PID data streams when determining the basis for the percentage calculation of the data limit.

84 Office of Communications [UK]. Data limits on Digital Terrestrial Television Multiplexes – Consultation on Draft Guidance (London: Ofcom, June 2006) p.6

FIGURE 11: SERVICES WHICH DO NOT FORM PART OF THE DATA LIMIT



[Adapted from a figure in Office of Communications [UK]. *Data limits on Digital Terrestrial Television Multiplexes – Consultation on Draft Guidance* (London: Ofcom, June 2006)]

RECOMMENDATIONS:

The WG notes that the current definition of broadcasting in the ECA only contemplates the unidirectional provision of broadcasting services, interactive and data services (e.g. EPG) provided in the content stream of a broadcasting service would therefore constitute an electronic communication service for the purposes of the Act. It is recommended that broadcasters either be required to hold an electronic communication service licence or that ICASA issues an exemption for broadcasting services from the requirement to hold an electronic communication service licence in terms of section 6 of the ECA.

(d) *Broadcasting Signal Distribution*

In examining broadcasting signal distribution and multi-channel signal distribution, it is important to note that the ECA attempts to be technology neutral, and accordingly provides for the licensing of all platforms. This is particularly evident in Chapter 3, which deals with the licensing framework and provides for the licensing of an electronic communications network service. The ECA defines such as service as follows:

“electronic communications network service” means a service whereby a person makes available an electronic communications network, whether by sale, lease or otherwise—

(a) for that person’s own use for the provision of an electronic communications service or broadcasting service;

*(b) to another person for that other person's use in the provision of an electronic communications service or broadcasting service; or
(c) for resale to an electronic communications service licensee, broadcasting service licensee or any other service contemplated by this Act, and "network services" is construed accordingly;"*

The above definition must of course be examined against the background of the definition of an electronic communications network in the ECA, which states that an:

"electronic communications network" means any system of electronic communications facilities (excluding subscriber equipment), including without limitation—

(a) satellite systems;

(b) fixed systems (circuit- and packet-switched);

(c) mobile systems;

(d) fibre optic cables (undersea and land-based);

(e) electricity cable systems (to the extent used for electronic communications services); and

(f) other transmission systems, used for conveyance of electronic communications; (our own emphasis)

It is clear from the foregoing definitions that an electronic communications network service is no more or less than infrastructure and use of the infrastructure to convey electronic communications and/or broadcasting. However, despite the chapter 3 approach to technological neutral licensing, it is noteworthy that broadcasting signal distribution and multi-channel distribution have been singled out in the ECA as a ring-fenced area of electronic communications networks.

Bearing in mind of course that as ring-fenced area they cannot be broader than the definition of electronic communications network services and must be interpreted within the confines of the broader legal definition of electronic communication network services as set out in the ECA. The ECA defines broadcasting signal distribution as follows:

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

It is fairly clear from this definition that broadcasting signal distribution commences at the point that the broadcasting service makes available the signal for conveyance in its final content format. Although this definition includes multi-channel distribution, the ECA also provides a definition of a multi-channel distribution service which is defined as

"a broadcasting signal distribution service that provides broadcasting signal distribution for more than one channel at the same time on the same signal, and "multi-channel distributor" is construed accordingly" (emphasis added).

It is the view of the WG that there is nothing in the ECA that would preclude electronic communication network service licensees from providing a broadcasting signal distribution service or implementing multi-channel distribution for broadcasting services, and consequently there would be no requirement to amend the ECA in this regard. There may, however, be a need for ICASA to

amend existing licences with respect to imposing conditions specific to the roll-out of digital broadcasting transmission networks as per a phased strategy set out in a national strategy for digital switchover.

There has been much debate about the terms “multiplexing” and “multiplexes” which are used in Europe and how these concepts fit in with the electronic communication network service licence. There is no definition of these two terms in the ECA and there are no licence categories in the ECA for these terms. However, the following meaning can be assigned to “multiplex” by reference to the Digital Broadcasting Frequency Plan submitted by South Africa to the ITU for RRC-06. In this plan the four multiplexes (2 national and two metropolitan networks) are understood to be the individual networks of frequencies reserved for ensuring the digital broadcasting of television programmes. In other words, in the South African context, a “multiplex” can be considered to be the network of frequencies required for a national digital broadcasting service or metropolitan digital broadcasting service and the relevant licence that would be required for such a network of frequencies would be a radio frequency spectrum licence. In terms of the ECA both the broadcasting service licensee and the electronic communications network service licensee are required to hold this licence. Broadcasters have recognised that there is a dissenting view,⁸⁵ but are of the view that the current situation in the ECA should be seen as an acceptable compromise.

It is the view of the WG, that a broadcasting service is the organisation who would be responsible for assembling and presenting all the programme services that feed the transmitters of a signal distribution services. In order to feed the transmitters in a digital broadcasting environment the broadcasting service must provide the content, through the activity of multiplexing, either as MPEG_2 or MPEG-4 compressed video and audio in a multi-programme Transport Stream, with sub-titling, text services, application data and SI information data⁸⁶ for transmission by the network service. The WG hold the view that this activity of multiplexing is part of the practical implementation of broadcasting and does not require specific mention in any licence category. The above principle holds true for digital television and radio, it is interesting to note that in the case of the digital radio standard Digital Radio Mondiale (DRM) there is no multiplexing as only a single channel is carried.

⁸⁵ Sentech is not in agreement with such view. According to Sentech, a broadcasting service licensee may not provide a broadcasting service utilising any portion of the radio frequency spectrum without first obtaining a radio frequency spectrum licence in terms of the ECA, only if it is self-providing a broadcasting signal distribution function under its Electronic Communication Network Service license.

⁸⁶ Service Information data, as specified by ETSI. Embedded data provided in a transmission to enable the receiver to find and decode all the services.

RECOMMENDATION:

The WG makes the following recommendations, namely that:

1. the decision of either retaining the technical activity of multiplexing in the broadcasting service or outsourcing it to the electronic communications network service be left to the commercial decision of the individual broadcaster; and
2. competition should be promoted to the extent that it is feasible to do so in the area of DTT and Digital Radio broadcasting signal distribution.

DISSENTING VIEW:

Sentech expressed a dissenting view to recommendation 2, namely that the two national networks of frequencies submitted to the ITU during RRC-06 should both be assigned to Sentech even though Orbicom is an Electronic Communication Network Service licensee (currently providing broadcasting signal distribution). There is a definition of common carrier in the ECA that relates to Electronic Communication Network Services. The ECA does not abolish the common carrier status of Sentech. However, the ECA makes the common carrier status non-exclusive. Sentech's insistence on maintaining exclusivity on common carrier is only restricted to the smooth migration from analogue to digital, paying particular emphasis to Public Broadcasting Services.

Orbicom has supported Sentech on the dissenting view that frequencies should be assigned to a Electronic Communication Network Service licensee, rather than a broadcasting service in a digital environment. Orbicom further holds the view that any preferential licensing of frequencies for Sentech as requested above should be restricted to the two national digital broadcasting transmission networks planned for at RRC-06 and that the licensing of frequencies for any other digital broadcasting transmission networks should recognise the fact that Sentech is not the only Electronic Communication Network Service licensee currently providing a broadcasting signal distribution service in South Africa. Orbicom currently transmits signal for M-net, with the exception of High sites, for which only Sentech had the right to transmit signals under the previous legislation.

(e) Radio Frequency Spectrum.

Section 30 of the ECA deals with the control of radio frequency spectrum and it provides that:

"(1) In carrying out its functions under this Act and the related legislation, the Authority controls, plans, administers and manages the use and licensing of the radio frequency spectrum except as provided for in section 34.

(2) In controlling, planning, administering, managing and licensing the use of the radio frequency spectrum, the Authority must –

(a) comply with the applicable standards and requirements of the ITU and its Radio Regulations, as agreed to or adopted by the Republic;

(b) take into account modes of transmission and efficient utilisation of the radio frequency spectrum, including allowing shared use of radio frequency spectrum when interference can be eliminated or reduced to acceptable levels as determined by the Authority;

- (c) give high priority to applications for radio frequency spectrum where the applicant proposes to utilise digital electronic communications facilities for the provision of broadcasting services, electronic communications services, electronic communications network services, and other services licensed in terms of this Act or provided in terms of a licence exemption;
- (d) plan for the conversion of analogue uses of the radio frequency spectrum to digital, including the migration to digital broadcasting in the Authority's preparation and modification of the radio frequency spectrum plan; and
- (e) . . .". (emphasis added)

It is the view of the WG that this section read together with section 34 of the ECA, which deals with the national radio frequency plan, clearly indicates the specific intention of the legislature that ECA should cater in its provisions for the switchover from analogue to digital terrestrial broadcasting. In terms of the powers delegated to ICASA in Chapter 5 of the ECA there is no obstacle to digital switchover.

In regards to the licensing of radio frequency spectrum an interesting situation arises. Section 63(3) of the ECA provides that:

"A broadcasting service licensee may not provide a broadcasting service utilising any portion of the radio frequency spectrum without first obtaining a radio frequency spectrum licence in terms of this Act."

This appears to be very clear that the broadcasting service must in addition to its broadcasting service licence also be a holder of a radio frequency spectrum licence. There has been some debate about whether section 63(3) applies only to cases of self-provision based on inclusion of the heading into an interpretation of the provision. However, the first viewpoint is supported by section 31(2) of the ECA, where it states that:

"A radio frequency spectrum licence is required in addition to any service licence contemplated in Chapter 3, where the provision of such service entails the use of radio frequency spectrum."

However, a complication is that in section 31(1) of the ECA it also states:

". . . no person may transmit any signal by radio . . . except under and in accordance with a radio frequency spectrum licence granted by the Authority to such a person in terms of this Act."

This leads to a situation where both the broadcasting service and the broadcasting signal distributor or electronic communications network service licensee will be assigned the rights to the same frequency. Although on first viewing there appears to be a conflict, this is not necessarily the case if one interprets these provisions in conformity with the objects of the Act.

The WG hold the view that what this means in practice is that when a broadcaster makes an application for a broadcasting service licence the application must also include a radio frequency spectrum licence application containing details of the frequencies which are being applied for and an indication of who will be providing the signal distribution. ICASA would then issue the radio frequency spectrum licence to both the broadcasting service and the electronic communications network service.

RECOMMENDATION:

The WG recommends that:

1. when ICASA prepares the radio frequency plan, which must take place within 12 months of the ECA commencing, it incorporates the decisions taken at ITU RRC-06 with regards to the planning of frequencies for digital switchover; and
2. No amendment is required to the ECA in regard to the licensing of radio frequency spectrum.

DISSENTING VIEWS:

Sentech has placed on record its dissenting view to recommendations in this report that are similar to recommendation 2 above, namely that in a digital environment, frequencies must be assigned to the Electronic Communication Network Service licensee instead of the broadcaster. The assignment of frequencies to broadcasters in a digital environment will inhibit the process of migration and the freeing up of spectrum which is a scarce resource. Sentech's interpretation of section 63(3) of the ECA is different to what is contained and understood by some members of the WG. A broadcasting service licensee can utilise the services of an electronic communication network service for the transmission of its content. ECA enables broadcasting service licensees to self provide an electronic communications network service upon obtaining the relevant licence. A broadcaster which utilises another entity for the provision of broadcasting signal distribution does not need the radio frequency spectrum to be assigned to it as required in section 63(3.). Section 31 (2) is open to different interpretations. Sentech's interpretation is that in a digital environment frequencies must be assigned to the Electronic Communication Network Service Licensee.

The broadcasters view is that according to the ECA, broadcasters are entitled to broadcasting services and frequency spectrum licences⁸⁷. Both interpretations might be correct. Clarity should be sought by the Department of Communications and ICASA. Sentech is of the view that the Minister of Communications is empowered to issue policy directions to remedy the situation of two conflicting interpretations. According to Section 3 of ECA the Minister is entitled to make policy direction on matters of National policies applicable to the ICT Sector, in relation to, among others, (3) (a) Radio Frequency Spectrum, (3) (d) application of new technologies pertaining to electronic communication services, broadcasting services and electronic communication network services. Section 3 (1) (a) and (d), empower the Minister to give direction in order to achieve the smooth process of migration from analogue to digital broadcasting television.

Orbicom shares the Sentech view that frequencies should be assigned to the Electronic Communication Network Service licensee instead of the broadcaster in a digital environment. Orbicom has expressed no views on the interpretation of the ECA in this regard.

⁸⁷ As a point of clarity it should be noted that the view of the WG is that in fact the ECA requires the broadcaster (broadcasting service) and its broadcasting signal distributor (electronic communication network service) to hold the same radio frequency spectrum licence. This compromise in the legislation results in prejudice to neither party.